

Dear Sir/Madam

You are now the owner of a LANCER WASHER.

This is one of the most perfected machines in existence. Its proper functioning as well as your total satisfaction depend on its proper installation.

We herein offer you some advice which we ask you to follow, for it is presented in your best interest.

Before using your machine, study this manual carefully and learn how to use the machine so that it will last for many years,

Yours truly "LANCER WASHER"

# S U M M A R Y

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## CONNECTIONS

It is important for the equipment to be installed in CLEAN DRY premises.

### ELECTRICAL CONNECTIONS

TOTAL DELIVERY OUTPUT : 10 kw

THREE-PHASE 415v + NEUTRAL + EARTH - 50Hz - consumption 14 A/phase.

PROVIDE A DISCONNECTOR AND A R.C.D BREAKER NEAR EQUIPMENT UNIT.

### CONNECTING UP TO WATER MAINS

HOT WATER : MAXIMUM 50° C.

Fit one 20/27 ø (3/4") male, threaded nozzle-type cock.

FLOW-RATE : 20 l. per min at a minimum pressure of 2 bars and maximum pressure of 6 bars.

IF THERE IS NO HOT-WATER AVAILABLE, PROVIDE 2 COLD WATER COCKS.

COLD WATER :

Fit one 20/27 ø (3/4") male, threaded nozzle-type cock.

FLOW-RATE : 20 l. per min. at a minimum pressure of 2 bars and maximum pressure of 6 bars.

DEMINERALIZED OR DISTILLED WATER :

2 possibilities

#### a) INSTALLATION FROM A WATER TANK

The height of the tank should not exceed 60 cm. It should have a screw-in metal plate (diam. 20/27) at its base. It should be placed at 15 cm from the floor.

#### b) INSTALLATION UNDER PRESSURE

Fit one 20/27 ø (3/4") male, threaded nozzle-type cock.

FLOW-RATE : 20 l. per min. at a minimum pressure of 2 bars and maximum pressure of 6 bars.

**ACID**

Place a tank close to equipment unit and fill with ACETIC ACID DILUTED WITH 75% WATER. It is to be placed a maximum of 15 cm from the ground.

**DETERGENT**

Place a tank close to equipment unit and fill with NON-FOAMING LIQUID DETERGENT. It is to be placed a maximum of 15 cm from the ground.

Please note your machine has been set and tested with Lancer clean detergent and Lancer acid.

It may be necessary to make further adjustment if other products are to be used.

**WASTE-WATER REMOVAL**

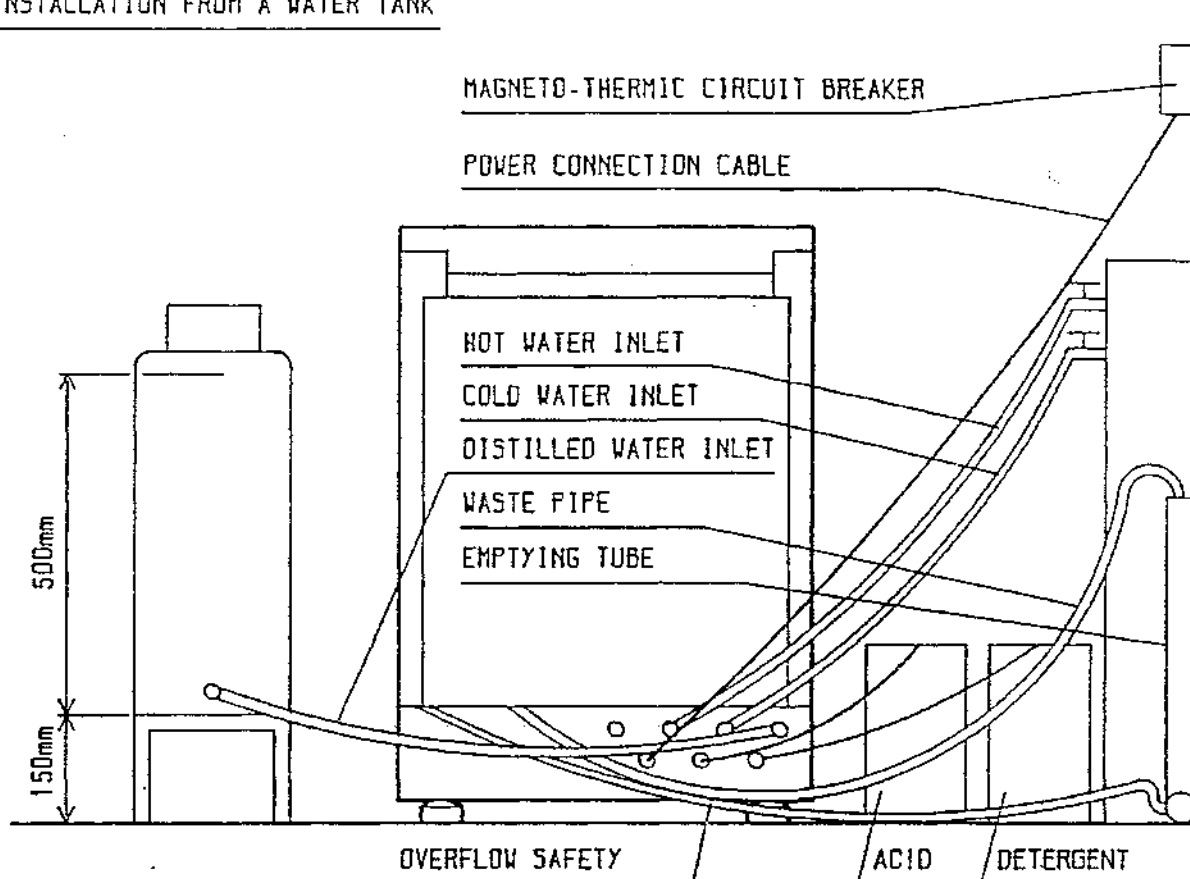
Fit a 40 mm i.d. waste pipe : height above floor : 0.5 m.

**OVERFLOW REMOVAL**

Height above ground : maximum of 0,30 m. : 20 mm Diameter for connecting up with hose supplied with the washer.

**PROGRAMME ORIGINATION**

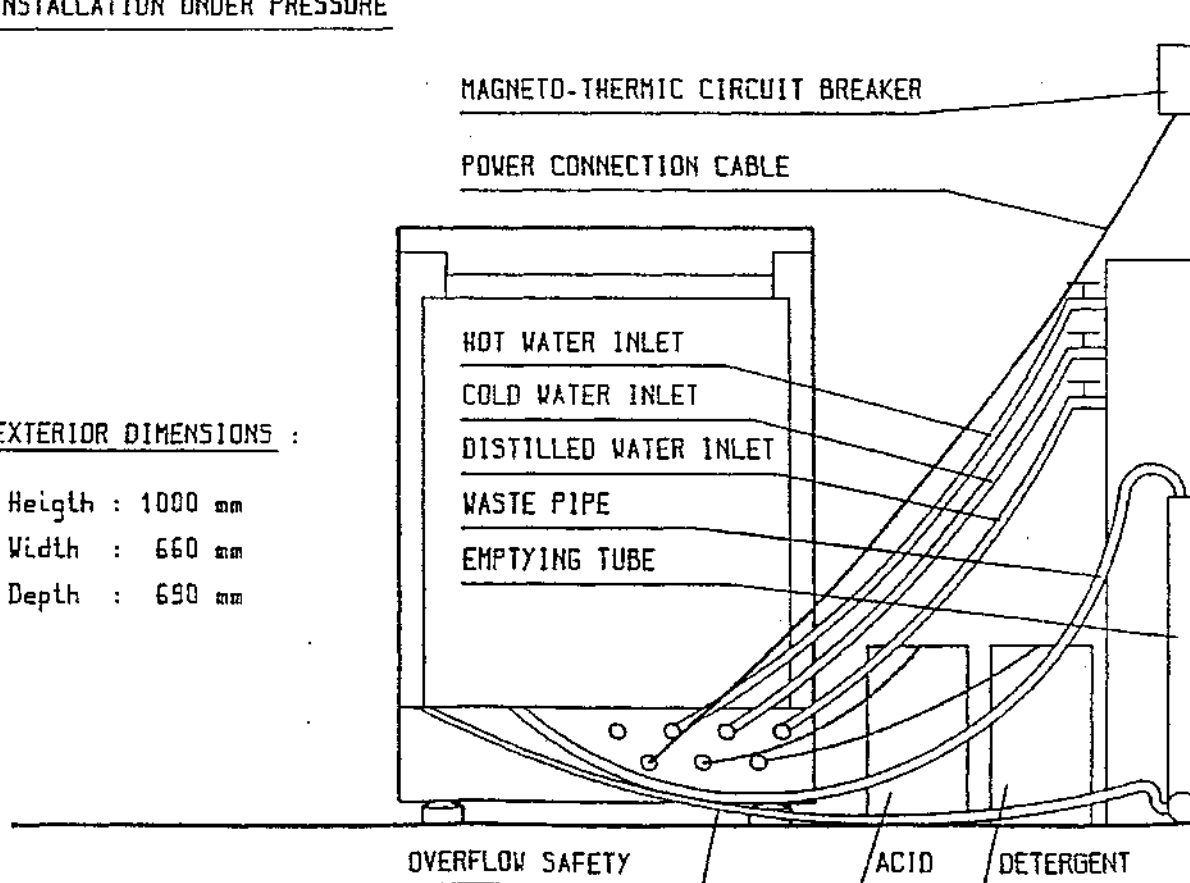
Programmes are devised at the factory on the basis of the user's requirements. But they can be changed at will according to the drawings supplied with this guide.

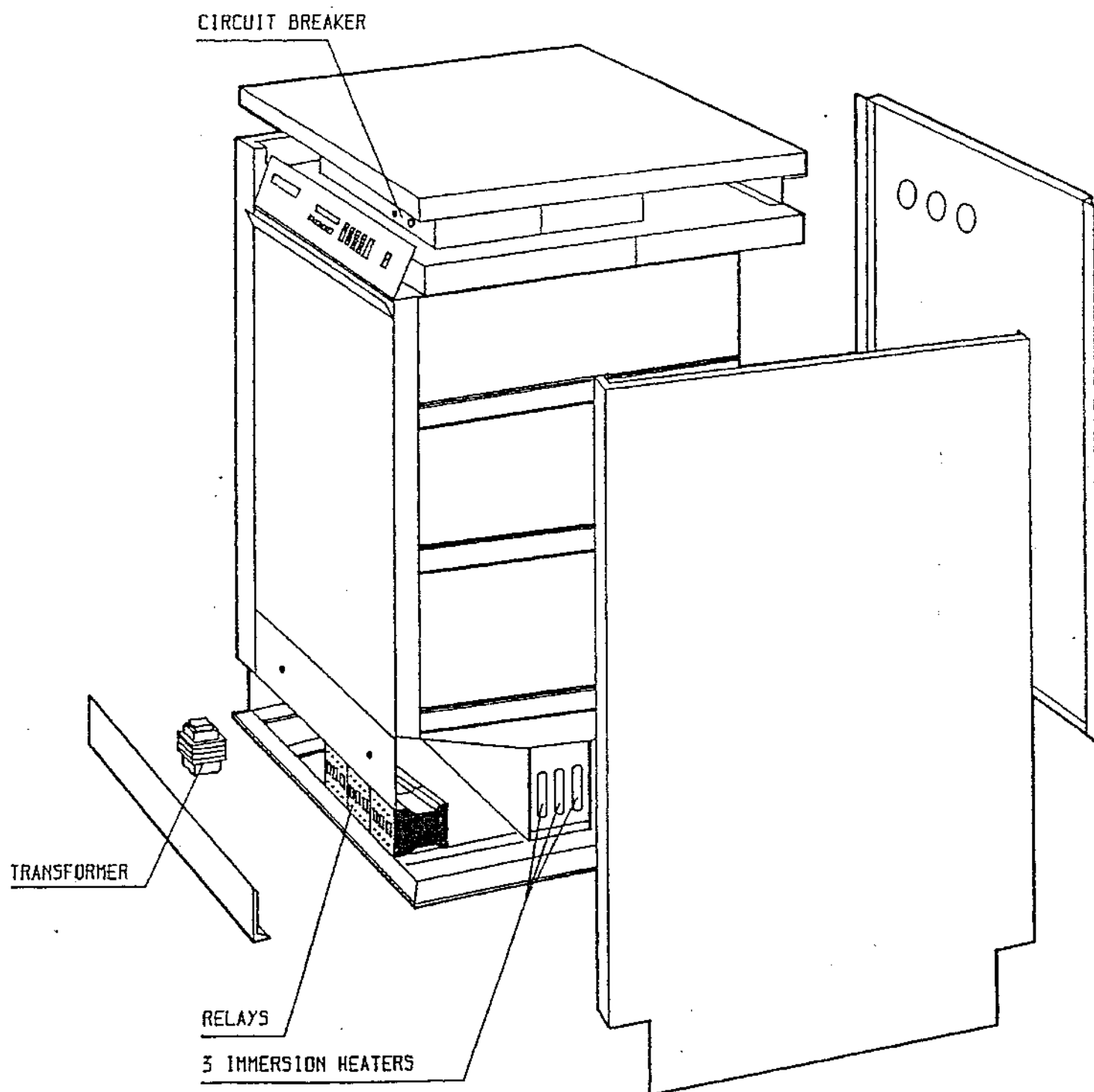
INSTALLATION PLANa) INSTALLATION FROM A WATER TANKb) INSTALLATION UNDER PRESSUREEXTERIOR DIMENSIONS :

Height : 1000 mm

Width : 660 mm

Depth : 690 mm



ACCESS TO ELECTRICAL ELEMENTS

INSTALLATIONI - HYDRAULIC CONNECTIONS

Flexes necessary for connection to machine on various water intakes are supplied with apparatus.

Drain pipework.

Make connections, taking great care to fit nylon filters in joining pieces on feed-cocks side.

II - LIQUID DETERGENT

Fill (if necessary) tank provided for this purpose.

To obtain a good wash, it is essential to use only enough non-foaming detergent to dissolve dirt.

III - ACID

Fill (if necessary) tank provided for this purpose.

75% DILUTED ACETIC ACID EXCLUSIVELY

NB

Adjust 4 thruster feet to make sure apparatus is perfectly LEVEL. In no case, must machine tilt forward.

IV - OPENING MACHINE

Pull handle towards you and door right back.

A safety device automatically cuts out recirculating pump when door is opened. Avoid inadvertent opening of door, not arresting advance of programme.

BEWARE

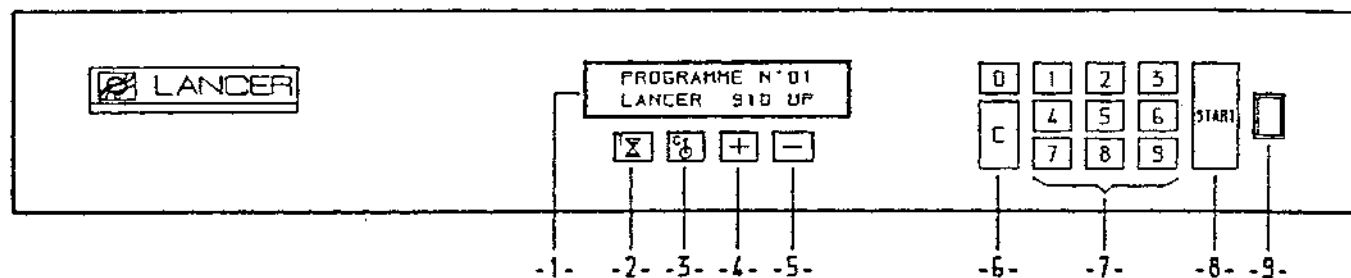
THE MACHINE HAS BEEN COMPLETELY EMPTIED OF WATER. IT IS ESSENTIAL THEREFORE TO POUR TEN LITRES OF WATER INTO THE TANK WITH A CONTAINER, BEFORE FIRST USE. BEFORE ANY START-UP, ENSURE FEED-COCKS ARE OPEN.

V - PARTS TO BE WASHED

Place them properly in baskets, so that they don't collide during washing : ensure that they are positioned suitably maintaining them with a GC or GCI COVER-SCREEN, if necessary.

ONLY USE BASKETS APPROPRIATE TO THE PARTS BEING WASHED

After reclosing door, wash-cycle can commence.

CONTROL PANEL

## LEGEND :

- 1- DISPLAY
- 2- TIME BUTTON  
Press, and it gives a reading of time programmed for current function.
- 3- TEMPERATURE BUTTON  
During a heating function, it gives a reading of temperature programmed.
- 4- "+" FUNCTION BUTTON (RAPID RUNNING)  
Enables you to skip any unwanted operations, and by way of an EXCEPTION, to choose another point of departure in programme selected.
- 5- "-" FUNCTION BUTTON  
Reading of programme name during operation of machine. See page 18.
- 6- "C" CORRECTION BUTTON  
When current on, it enables programme N° 01 to be reselected.
- 7- DIGITAL KEYBOARD  
Permits selection of programme.
- 8- "START" BUTTON  
Permits cycle start.
- 9- APPARATUS POWER-SWITCH  
Enables programme to be started using "START" button.



STARTING UPI - SWITCHING ON POWER

Throw switch -9-.

Display -1- indicates number of last programme carried out and type of machine.

PROGRAMME N° 34 LANCER 910 UP
----------------------------------

II - PROGRAMME

To change programme, push -C- correction button, then enter number of programme wanted, using digital key button -7-.

III - START OF CYCLE

Press "START" button and one of two permutations can be chosen :  
the display indicates :

- A
- Number of programme selected,
  - Temperature of tank,
  - Current function, RESINS RINSE.

26	24°C
RESINS RINSE	

The cycle will unfold without further intervention.

B - DRAINAGE ALARM (in event of tank containing water at start of cycle, either through interruption of previous cycle or an irregular intake).

Machine will drain and cycle unfold normally.

IV - DEVELOPMENT OF THE OPERATIONS

During cycle, permanently displayed are :

- Number of current programme,
- Water or drying temperature of air in tank,
- Name of current function.

V - END OF CYCLE

The display -1- resumes its initial status.

VI - TURNING OFF POWER

Throw switch -9-.

VII - OPENING

Proceed as in IV page 7.

## COMMENT 1

In event of an interrupted electricity supply, programme is brought back to its point of departure. It is advisable then to initiate START OF CYCLE operations again, as in III.

## COMMENT 2

Using "+", RAPID ADVANCE CYCLE, function button, it is possible to skip operations already performed, provided programme position at time of power cut is known.

When function button "+" is pressed, basic stages are indicated, as they unfold, (eg filling, additive intake, ...).

## PROGRAMMING

The microprocessor automaton provides 40 programmes, 39 of which may be changed by user, the 40<sup>th</sup> is fixed in memory.

The microprocessor permanently monitors the good development of the operations.

Any malfunction is detected and indicated by error or alarm message displays, - see page 17.

### I - USE OF KEYBOARD

In programming mode, setting of operation PERIODS, TEMPERATURES and rinse NUMBER is obtained either by :

- Digital keyboard -7-
- Function buttons, "+" and "-"
- Correction button, -C-.

For ACID, DETERGENT, ADDITIVE intake periods, only function buttons "+" and "-" and correction -C- should be used. If one of digital keyboard buttons -7- is pressed, an error message is displayed. One of the three authorised buttons must be pressed to go back to the controls.

### II - ACCESS TO PROGRAMMING

Switch on the apparatus, throwing switch -9-.

Number of last programme used is then displayed.

Select programme 00 on button "0" of digital keyboard -7-.

PROGRAMME N°00 LANCER 910 UP
---------------------------------

Press "START" button to validate.

VALIDATION LANCER 910 UP
-----------------------------

Formulate access code -308-.

If an erroneous code is typed, an error message is displayed, until correct code is displayed.

VALIDATION INCORRECT
-------------------------

If code is correct,

PROGRAMME N° 01
--------------------

Choose programme to be changed.

Press "START" button to validate.

## III - ALTERATION OF PROGRAMME

```

01 PERIOD = 01min
   PREWASH 1

```

Choose period of prewash 1, between 1 and 30 mn MAX.  
(display of "0" time cancels function).  
Press "START" button to validate.

```

01 COLD WATER
   PREWASH 1

```

Select hot or cold filling water with correction button -C-.

```

01 HOT WATER
   PREWASH 1

```

Press "START" button to validate.

```

01 TEMP. = 90° C
   PREWASH 1

```

Choose prewash 1 temperature between 0 and 90° C.  
Press "START" button to validate.

```

01 DETERG. = 2m00s
   PREWASH 1

```

Choose period of detergent intake between 0 and 6 mn MAX.  
Each press on one of "+" or "-" function buttons alters a stage  
period by 6 seconds, ie approximately 20 ml.  
Press "START" button to validate.

```

USE KEYS +, -, C
   PREWASH 1

```

If one of digital keyboard buttons -7- is pressed, an error message  
is displayed. Press "+" or "-".

Set functions, PREWASH 2, PREWASH 3 and WASH in same way.

```

01  NUMBER = 2
RUNNING WATER 1

```

Choose number of running water rinses, between 0 and 9 MAX.  
Press "START" button to validate.

```

01  PERIOD = 01min
ACID RINSE

```

Choose period for acid rinse.  
Press "START" button to validate.

```

01  ACID = 12s
ACID RINSE

```

Choose period of acid intake, between 0 and 60 s MAX.  
Each press on one of function buttons, "+" or "-" alters a stage period by 1 second.  
Press "START" button to validate.

```

USE KEYS +, -, C
ACID RINSE

```

If one of digital keyboard buttons -7- is pressed, an error message is displayed.

```

01  NUMBER = 2
RUNNING WATER 2

```

Choose running water rinse number 2 between 0 and 9 MAX.  
Press "START" button to validate.

```

01  PERIOD = 01min
COLD DEMI.1

```

Choose period of cold demi. water rinse 1.  
Press "START" button to validate.

#### Comment

Set functions, COLD DEMI. WATER RINSE 2, 3, 4 in same way.

```

01 PERIOD =01min
HOT DEMI.

```

Choose hot demi. water period.  
Press "START" button to validate.

```

01 TEMP. = 90°C
HOT DEMI.

```

Choose hot demi. water temperature.  
Press "START" button to validate.

```

01 ADDITI. = 07s
HOT DEMI.

```

If the unit is equipped with an additive dispenser (optional), choose period of additive intake between 0 and 60 s MAX.  
Each press on one of "+" or "-" function buttons alters a stage period by 1 second.  
Press "START" button to validate.

```

USE KEYS +, -, C
HOT DEMI.

```

If one of digital keyboard buttons -7- is pressed, an error message is displayed. Press "+" or "-".

```

01 PERIOD =60min
DRYING

```

Choose drying period.  
Press "START" button to validate.

```

PROGRAMME N°01
LANCER 910 UP

```

The display will return to its initial status.

READING OF PROGRAMMES

Switch apparatus on by throwing switch -9-.  
Number of last programme used is then displayed.

Select programme 00.

PROGRAMME N°00 LANCER 910 UP
---------------------------------

Press "START" button to validate.

VALIDATION LANCER 910 UP
-----------------------------

Press "START" button a second time to validate.

PROGRAMME N° 01
--------------------

Choose programme.

Press "START" button to validate

The development of all the functions of the cycle is displayed by successive presses on "START" button.

At end of cycle, display returns to initial position.

DATA DURING CYCLE

During a cycle, it is possible at any time to know period of a sequence currently in progress by an enquiry on button "T".

In same way, pressing button "°C" gives heating temperature programmed.

If there is no heating in this sequence (ex : acid rinsing) or if heating is programmed at 00°C, reply will be "no heating".

In addition, simultaneously pressing buttons "T" and "°C" will give name of phase currently in progress, pressing on "T" and "+" will give period of this phase, and pressing "T" and "-" will give estimated remaining period of programme currently running.

Note :

Estimated remaining period can be read only if this programme has already been unwound.

Examples :

BUTTONS	DISPLAYS
T	period 01 min
°C	Temp = 40 °C
T and °C	Detergent
T and +	period = 0 min 18 s
T and -	Estimated period remaining 1 H 10 mn

Particular cases :

When H2O rinsing, sequence period is replaced by "NUMBER = X".

When filling, phase period is indicated by "LEVEL WAIT".



## ALARMS

The automaton may display 2 types of alarm.

### I - SALT DEFICIENCY

In event of a salt deficiency, a message is displayed at start of cycle, when "START" button is pressed.

It is essential to fill salt container located inside machine. See pages 26 and 28.

To continue cycle, another press on "START" button is necessary.

### II - FAULT ALARMS

These alarms lock machine. To leave alarm mode, switch off power, throwing switch -9-.

#### 1) FILLING FAULT

The machine has not reached its water level, before elapsing of normal filling time, as specified in factory.

Check opening of feed-cocks, state of water intake pipes, cleanliness of nylon filters.

#### 2) DRAINAGE FAULT

The machine was not entirely emptied at end of normal drainage period, as specified in factory.

Check that drainage pipe does not form an elbow, that drainage pump or its pipes are not obstructed, or that tank filters are not blocked.

#### 3) HEATING FAULT

At end of ten minutes of heating, temperature of water has not risen by minimum 5° C.

Check electrical connection and state of immersion heaters.

NAMES OF PROGRAMMES

Each of programmes can, other than by its number (1, 2, 3 ...), be "RECOGNISED" by a "NAME" which may be that of a service, an operator or a type of wash, - such as "INSTRUMENTS", "TEST TUBES" or "LABO 3". This name may be put in memory by operator, using an access code.

RECORDING PROCEDURE FOR NAMES OF PROGRAMMES

Switch apparatus on by throwing switch -9-.  
The number of last programme used is then displayed.

Select programme, 00.  
Press "START" button to validate.

VALIDATION LANCER 910 UP
-----------------------------

Formulate access code -000-.  
If an incorrect code is typed, an error message is displayed, until correct code is displayed.

VALIDATION INCORRECT
-------------------------

If code is correct,

PROGRAMME NAME 01
----------------------

Choose programme.  
Press "START" button to validate.

PROGRAMME NAME A
---------------------

The letter A appears at bottom of display.

Character selection is obtained by buttons, "+" or "-".  
Each character must be validated by pressing "START" button.  
Figures may be selected without validation with digital keyboard -7-.  
Space is obtained without validation using correction button -C-.

When name of programme is displayed, fill character line with spaces (by -C- button).

The display then suggests that next programme should be named.

The "NAMES OF PROGRAMMES" may be exited by pressing on correction button -C-, which returns display to its initial-status.

#### READING OF THE NAMES OF THE PROGRAMMES

Switch apparatus on by throwing switch -9-. The display then shows number of last programme used.

PROGRAMME N°01 LANCER 910 UP
---------------------------------

Select desired programme. (example : programme N° 18).

PROGRAMME N°18 LANCER 910 UP
---------------------------------

Then name of the programme appears when "-" button is pressed.

PROGRAMME N°18 INSTRUMENTS
-------------------------------

Simultaneous action on "+" and "-" buttons will enable names of programmes which follow, to be displayed.

PROGRAMME N°19 TEST TUBES
------------------------------

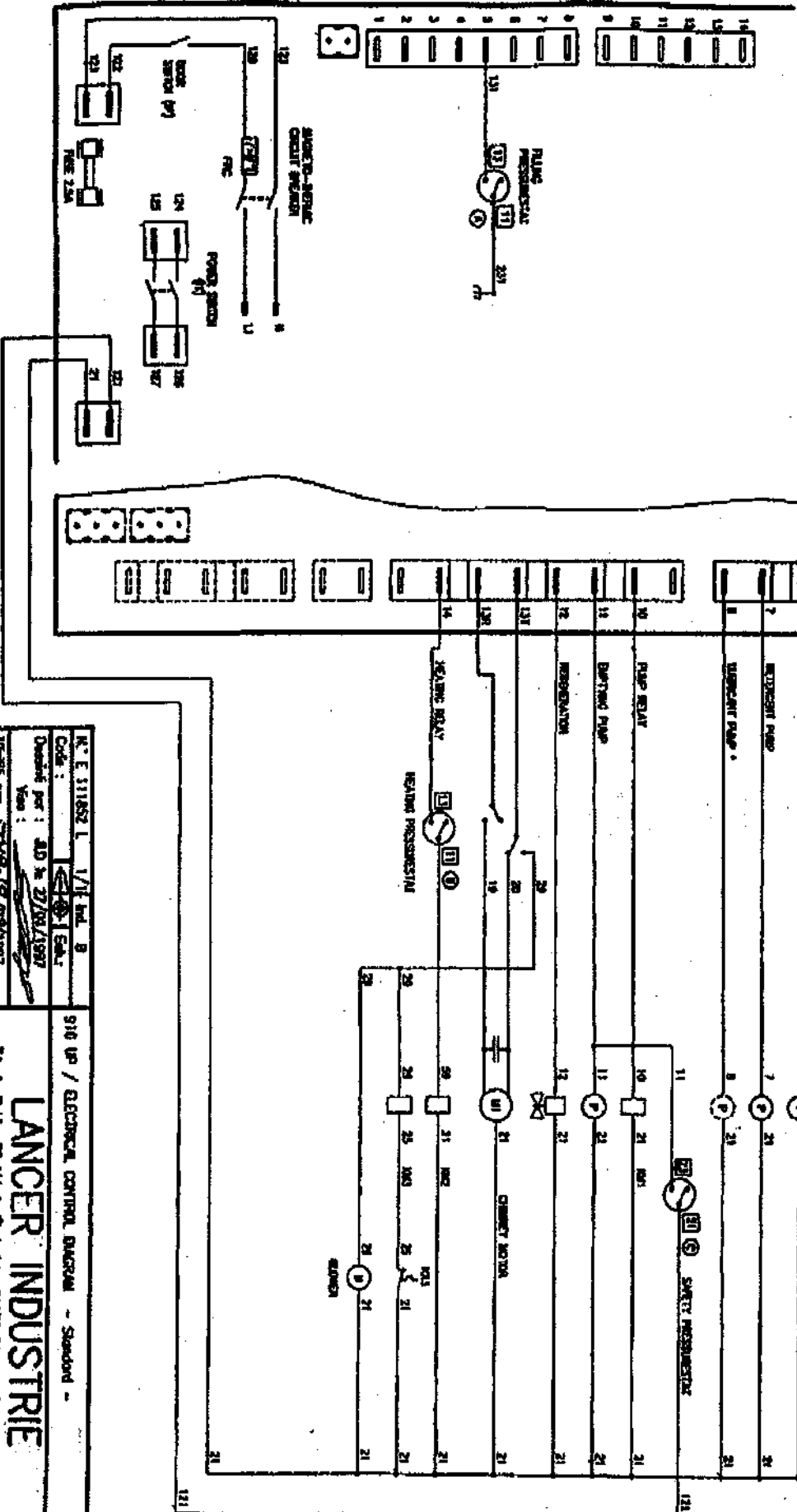
When "-" button is depressed, programme last displayed is selected.

FACTORY PROGRAMMING

FUNCTIONS	POSSIBILITY	PROG.1	PROG.2	PROG.3	PROG.4
PREWASH 1 PERIOD	0 to 30 min	0	0	0	4
PREWASH 1 TEMPERATURE	0 to 90 °C	0	0	0	40
PREWASH 1 DETERGENT	0 to 6 min	0	0	0	24s
PREWASH 2 PERIOD	0 to 30 min	0	0	0	0
PREWASH 2 TEMPERATURE	0 to 90 °C	0	0	0	0
PREWASH 2 DETERGENT	0 to 6 min	0	0	0	0
PREWASH 3 PERIOD	0 to 30 min	0	0	0	0
PREWASH 3 TEMPERATURE	0 to 90 °C	0	0	0	0
PREWASH 3 DETERGENT	0 to 6 min	0	0	0	0
WASH PERIOD	0 to 30 min	4	4	4	8
WASH TEMPERATURE	0 to 90 °C	40	70	80	85
WASH DETERGENT	0 to 6 min	48s	48s	48s	48s
RUNNING WATER RINSE 1	0 to 9	4	4	4	4
ACID RINSE PERIOD	0 to 30 min	0	2	2	2
ACID	0 to 60 s	0	18s	18s	18s
RUNNING WATER RINSE 2	0 to 9	0	4	4	4
COLD DEMI. WATER RINSE 1	0 to 30 min	0	0	1	1
COLD DEMI. WATER RINSE 2	0 to 30 min	0	0	0	0
COLD DEMI. WATER RINSE 3	0 to 30 min	0	0	0	0
COLD DEMI. WATER RINSE 4	0 to 30 min	0	0	0	0
HOT DEMI. WATER RINSE	0 to 30 min	1	1	1	1
HOT DEMI. TEMPERATURE	0 to 90 °C	50	50	50	50
HOT DEMI. ADDITIVE	0 to 60 s	0	0	0	0
DRYING	0 to 60 min	0	0	30	60

\* The linked group is labeled:  
-as a student in the linked unit.  
-as an officer in the laboratory unit.

910 U.P.



●

# LANCER INDUSTRIES

N. E. 311852 L 1/4 mil. B. Code : Described per : AD 22/00/1987 Year : Year : 5718-19/02/1987 Vendeur : Vendeur : Vendeur :	910 up / ELECTRICAL CONTROL DIAGRAM - Standard - <b>LANCER INDUSTRIE</b> 24, rue Paulin, 93 040 de Fontenay, 93170 NOUVOIRY-LEZ-LILLE, France Tél. : 03.61.15.11.15, Fax : 03.61.15.16.16
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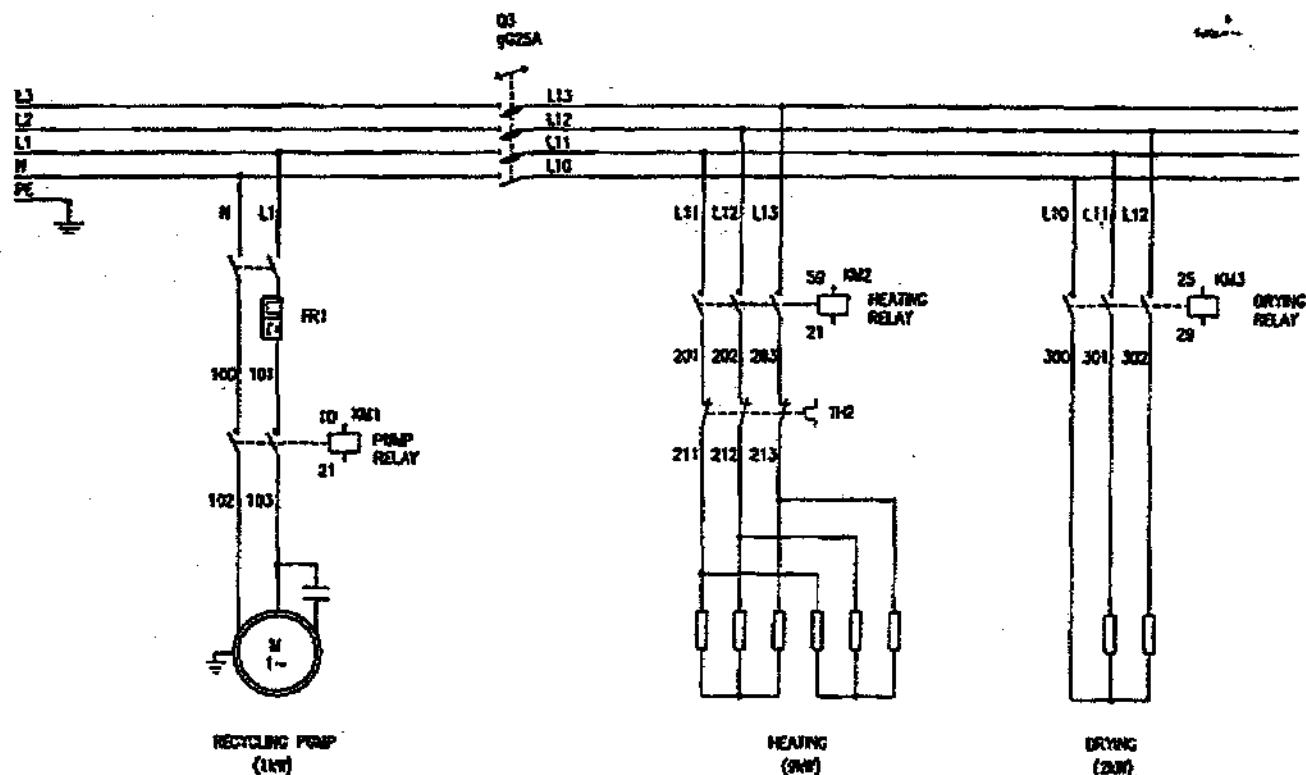
12-07-01

14:07

RECEIVED FROM:01223861990

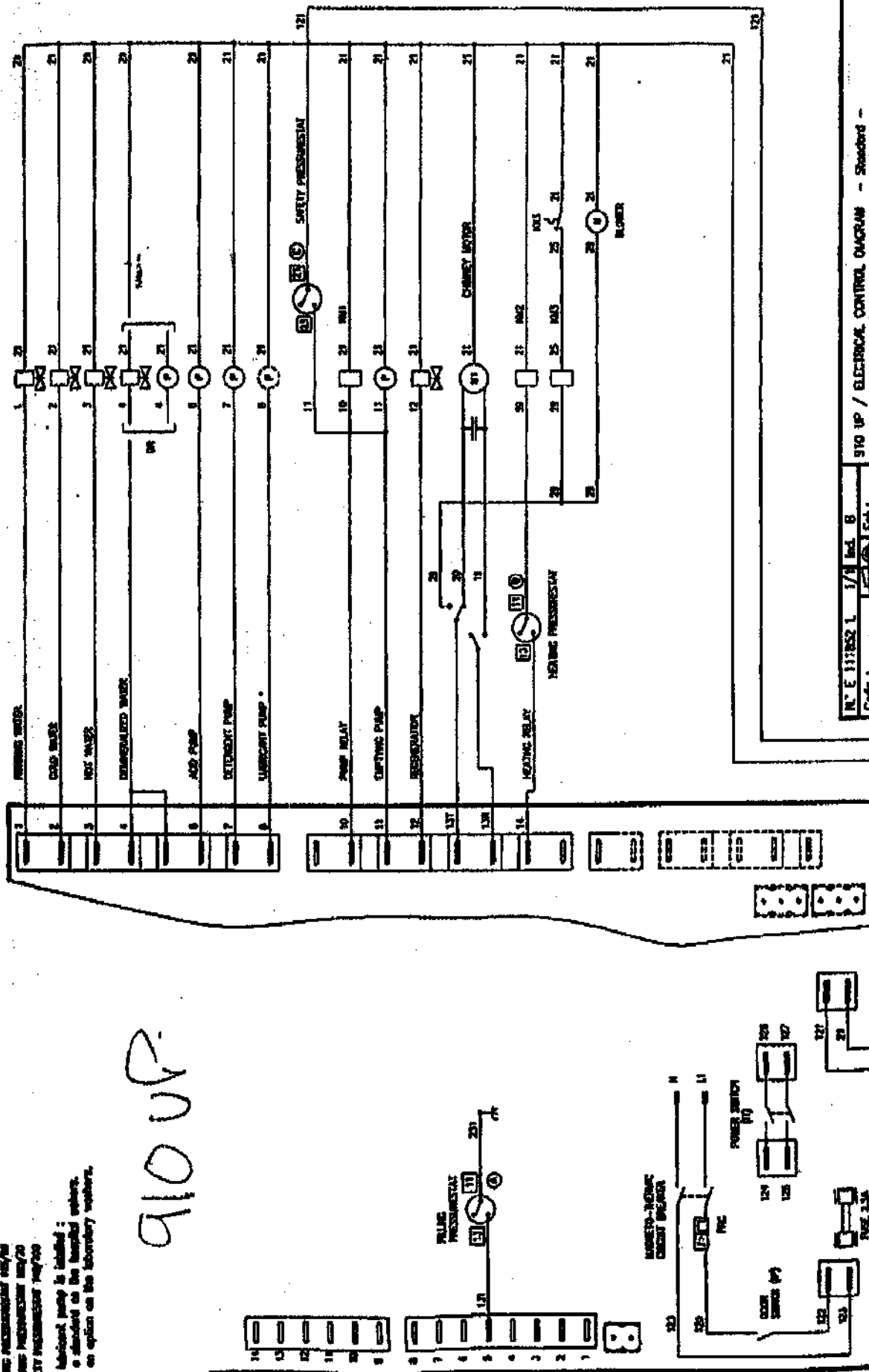
P.02

VERSION C



N° E : 11203 A 1/1 Ed. C	990 UP / ELECTRICAL POWER DIAGRAM - Standard -
Code : 1 Ech.	
Dessiné par : JLB le 27/01/1997	
Vérifié par : JLB le 27/01/1997	
Vérifié par : JLB le 27/01/1997	<p><b>LANCER INDUSTRIE</b>                  ZI de Pothin, 30 Bd de l'Industrie, 31170 TOURNIEVILLE, France                  Tél: 05.63.15.11.11, Fax: 05.61.15.16.16</p>

FIG 105



LANCER INDUSTRIE  
21 de Poën, 30 Bd de l'Industrie, 31170 TOURNEMIR, France  
TEL: 05.61.15.11.31, Fax 05.61.15.16.98

510 UP / ELECTRICAL CONTROL DIAGRAM - Standard -

N° E 111852 L	1/3	Ed. B
Code :	Ed. A	Ed. C
Quotient par : 30 le 27/03/1987		
Vente par : 01/04/1987		
Vente :		

910 UP

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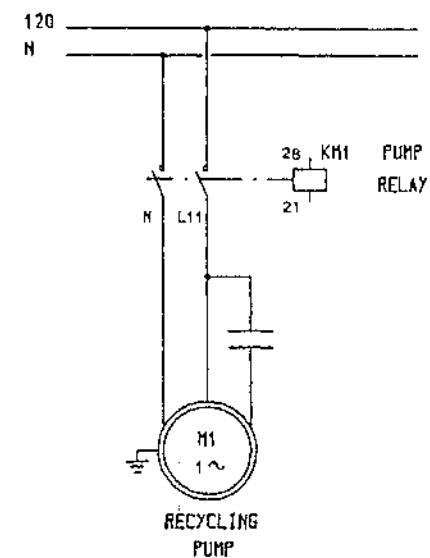
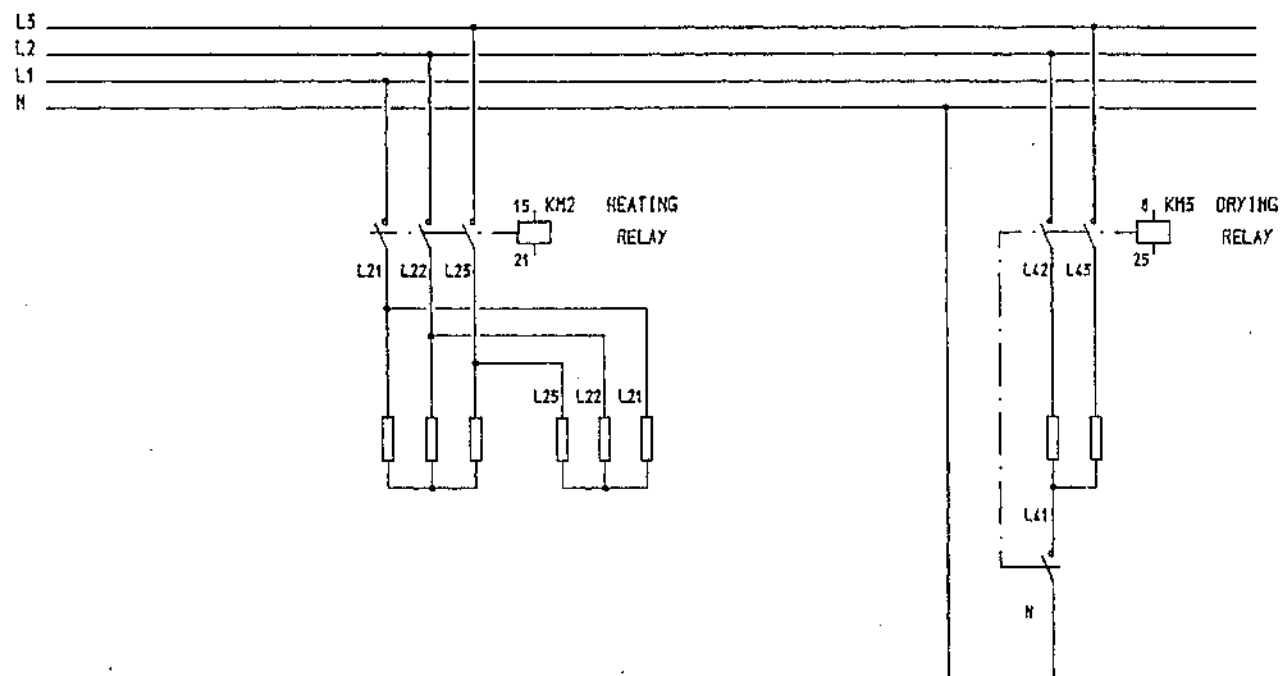
The lubricant pump is installed :  
- in a standard on the supplied system.  
- in an option on the laboratory system.

YOUR PROGRAMMING

FUNCTIONS	POSSIBILITY	PROG.	PROG.	PROG.	PROG.
PREWASH 1 PERIOD	0 to 30 mn				
PREWASH 1 TEMPERATURE	0 to 90 °C				
PREWASH 1 DETERGENT	0 to 6 mn				
PREWASH 2 PERIOD	0 to 30 mn				
PREWASH 2 TEMPERATURE	0 to 90 °C				
PREWASH 2 DETERGENT	0 to 6 mn				
PREWASH 3 PERIOD	0 to 30 mn				
PREWASH 3 TEMPERATURE	0 to 90 °C				
PREWASH 3 DETERGENT	0 to 6 mn				
WASH PERIOD	0 to 30 mn				
WASH TEMPERATURE	0 to 90 °C				
WASH DETERGENT	0 to 6 mn				
RUNNING WATER RINSE 1	0 to 9				
ACID RINSE PERIOD	0 to 30 mn				
ACID	0 to 60 s				
RUNNING WATER RINSE 2	0 to 9				
COLD DEMI. WATER RINSE 1	0 to 30 mn				
COLD DEMI. WATER RINSE 2	0 to 30 mn				
COLD DEMI. WATER RINSE 3	0 to 30 mn				
COLD DEMI. WATER RINSE 4	0 to 30 mn				
HOT DEMI. WATER RINSE	0 to 30 mn				
HOT DEMI. TEMPERATURE	0 to 90 °C				
HOT DEMI. ADDITIVE	0 to 60 s				
DRYING	0 to 60 mn				







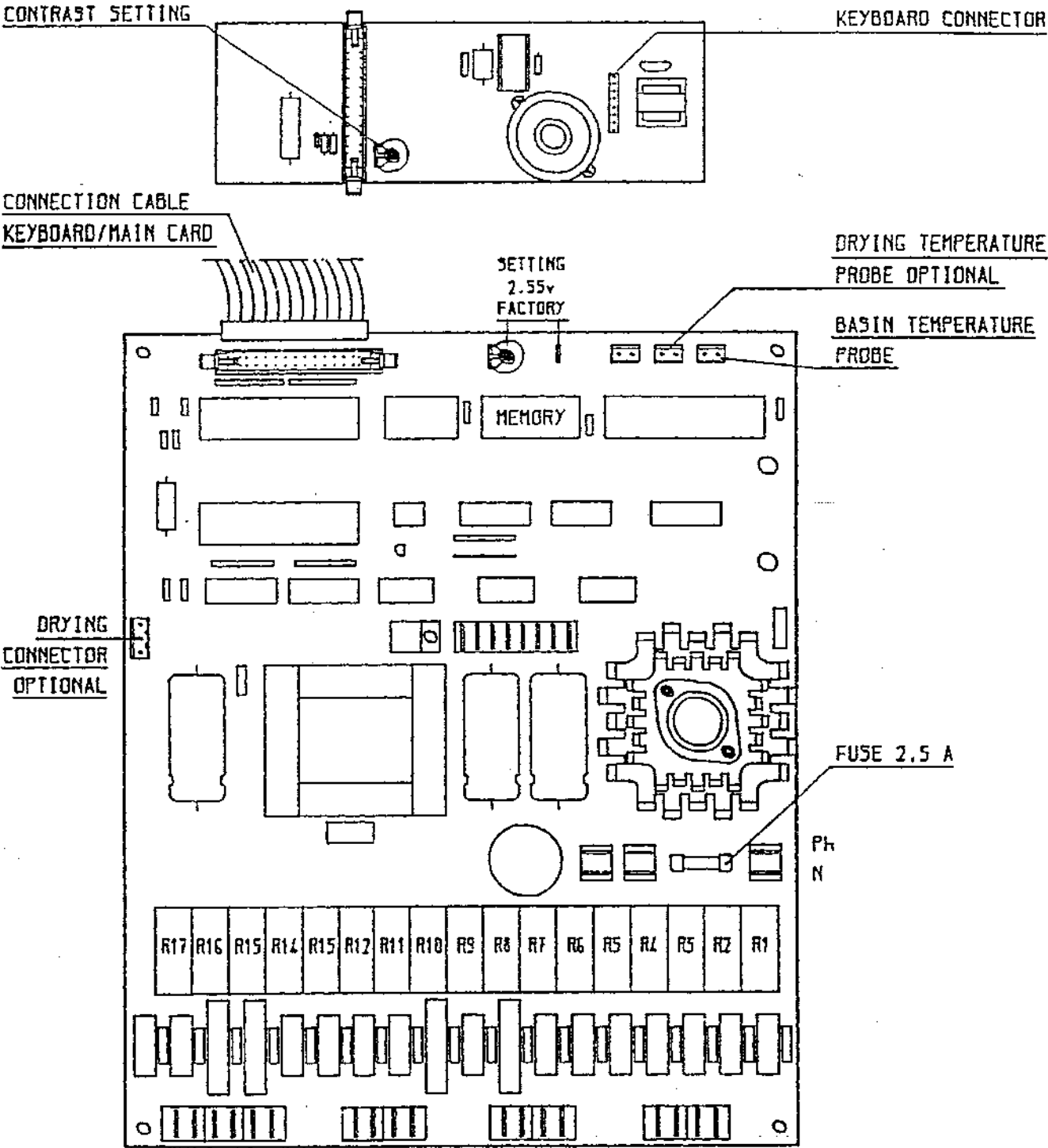
N° E 11229 P

910 UP : ELECTRICAL POWER DIAGRAM

LANCER SA INDUSTRIE

31170 TOURNEFEUILLE

ELECTRONICS CARDS



RECOMMENDATIONSTHE CORRECT CHOICE OF BASKETS TO SUPPORT THE ITEMS  
IS OF PRIMARY IMPORTANCE

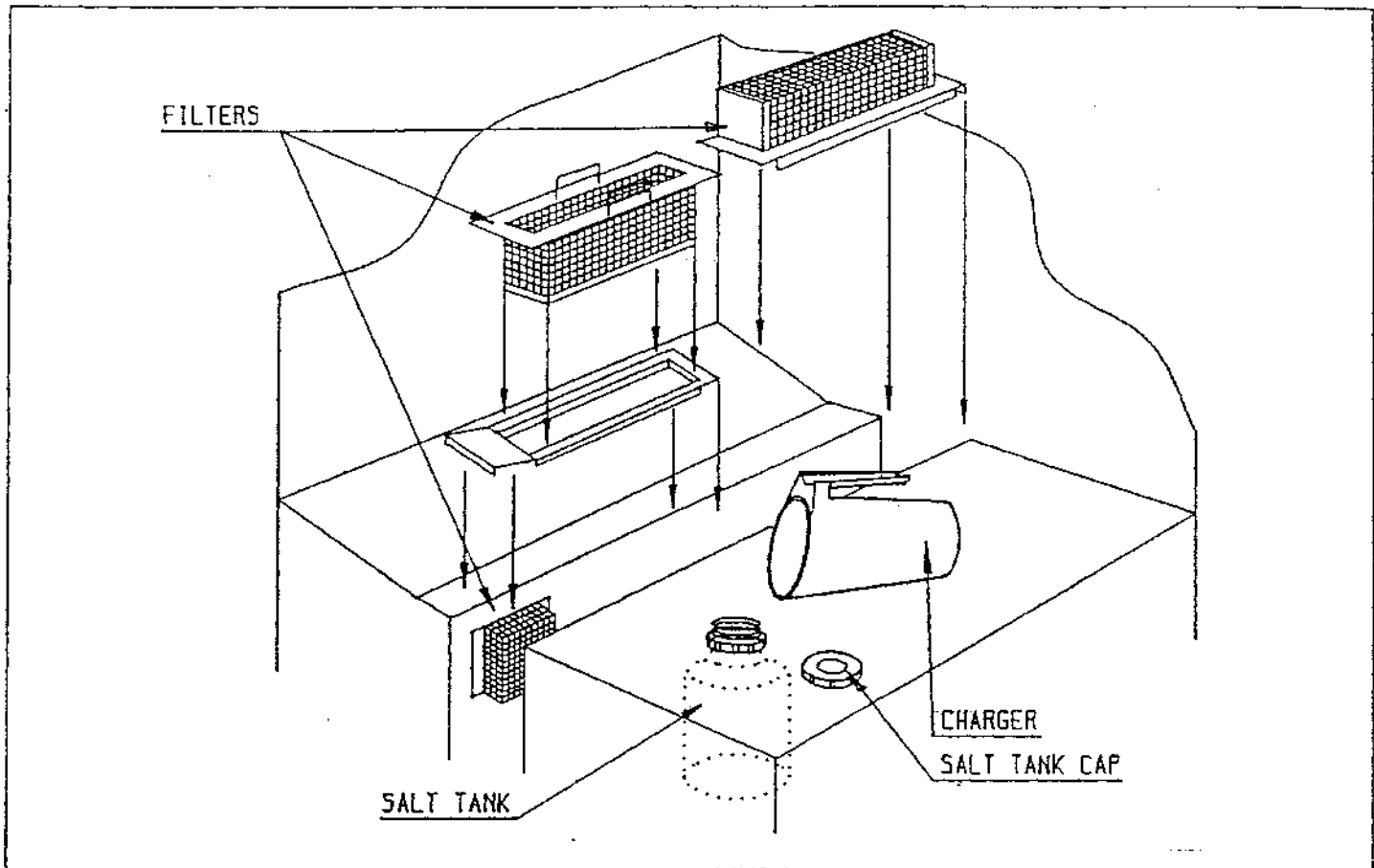
It is vital that the water flow from the type of injectors used be inferior to the water capacity of the items, in order to avoid the gradual filling-up of the containers. A narrow neck preventing the rapid draining of water, would result in an inferior wash due to poor circulation of water.

CHOICE OF DETERGENT

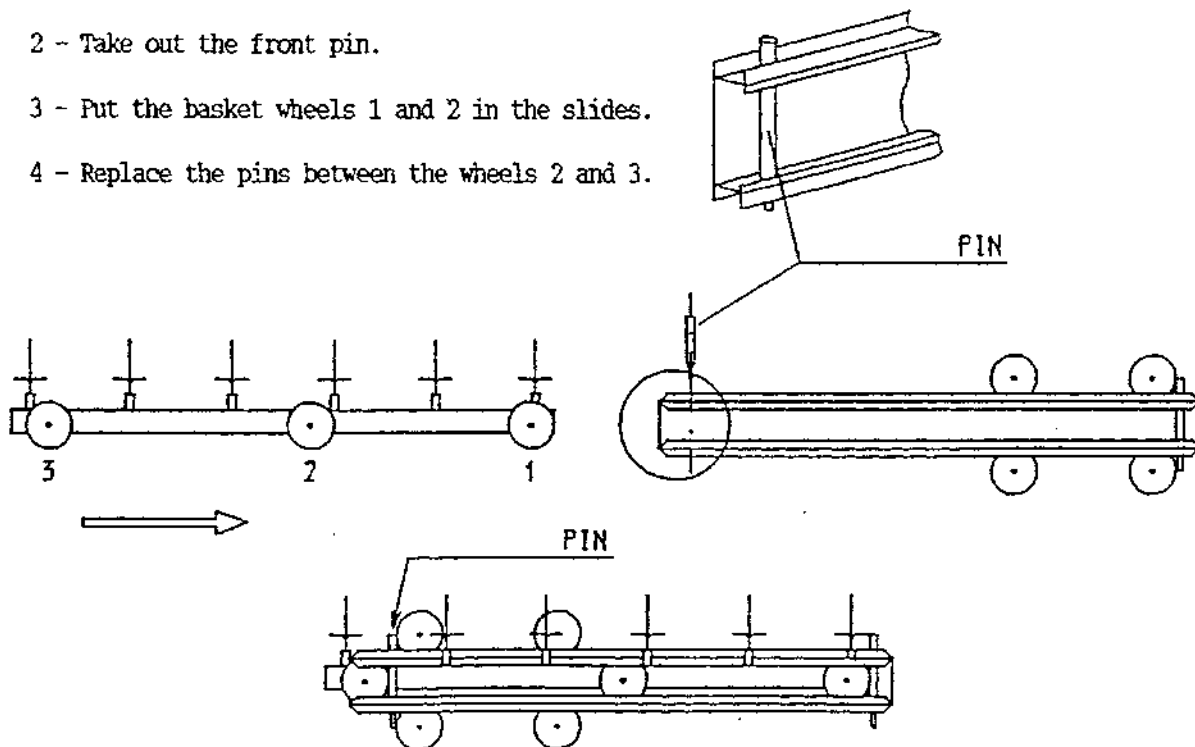
The choice of a detergent is very important, because it is often necessary to dissolve old dried-on deposits.

Because water pressure is the only mechanical device of the machine, it is absolutely necessary to use a DETERGENT corresponding to the substances to be washed.

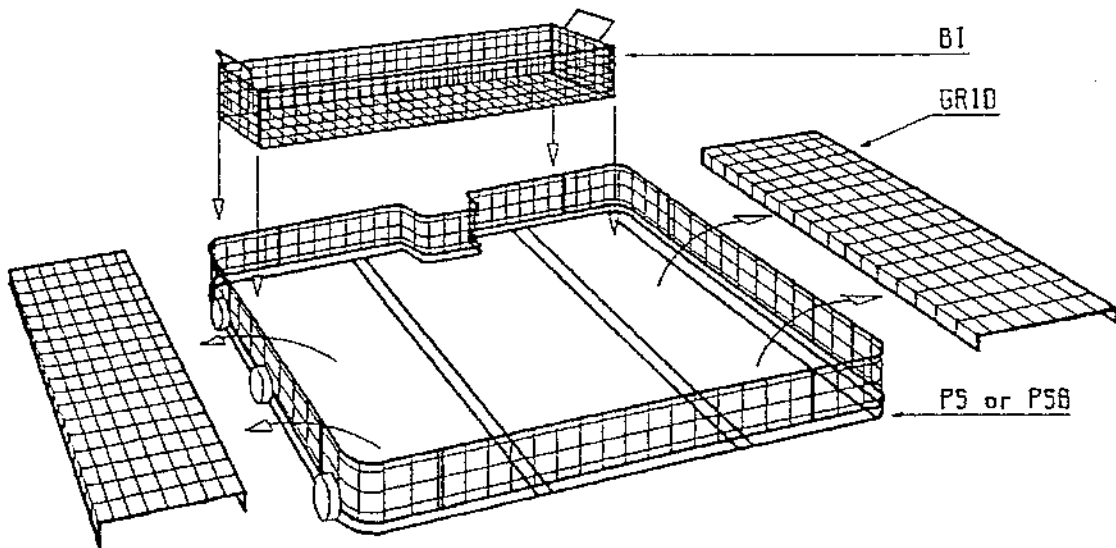
Everyone knows that a garden hose, even at very high pressure, does not remove dust from automobiles by itself.

BASIN BOTTOMHOW TO PLACE THE BASKETS

- 1 - Pull the slides out of the basin.
- 2 - Take out the front pin.
- 3 - Put the basket wheels 1 and 2 in the slides.
- 4 - Replace the pins between the wheels 2 and 3.

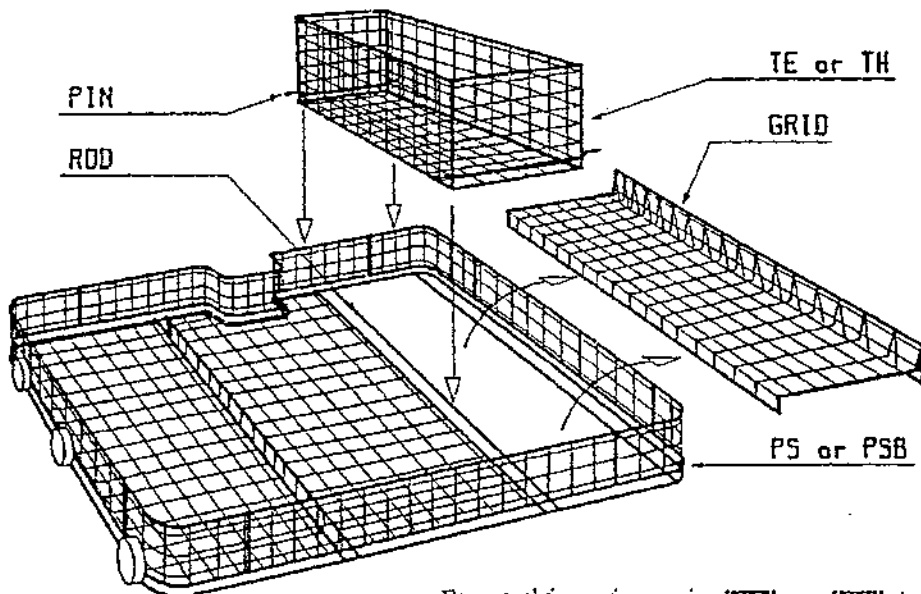


### WASHING IN "BI" BASKETS



For washing the pieces in "BI" type baskets. Place them on the "PS" or "PSB" rack after removing support grids as necessary. Reposition them for any washing for which the "BI" utilisation is not necessary.

### WASHING IN "TE" or "TH" BASKETS



For washing pieces in "TE" or "TH" type baskets. Place them on the "PS" or "PSB" rack as above. Be sure that the pins are well positioned on the rods made to receive them, reposition the grids for any washing for which the "TE" or "TH" utilisation is not necessary.

## MAINTENANCE

### REGENERATION OF WATER SOFTENER

This function is automatic.

When the alarm message is displayed , the salt tank must be filled.

We suggest that only "Special softener salt" must be used : replace the cap firmly after this operation. (see page 26).

### FILTERS

CLEAN THE FILTERS AFTER EACH WASH IF NECESSARY. (see page 26).

REPLACE THEM PROPERLY, in order to prevent the entering of foreign matter into the draining and recycling pumps.

## MAINTENANCE

- a) At the end of the wash, close the water taps so as not to leave the valves under pressure.
- b) Switch off electricity.
- c) Examine the condition of the rubber pipes from time to time, as well as the wires which connect the machine to the electrical current.

### NOTE

IN NO CASE SHOULD THE FOLLOWING PRODUCT BE USED : ACETONE, SOLVENTS, GASOLINE, SULFOCHROMIC, ANY ACID, EXCEPT ACETIC ACID, etc...

SMALL PROBLEMS, THEIR ORIGIN

YOU FEEL THE ELECTRIC CURRENT WHEN TOUCHING THE MACHINE

- The earth is not good.

THE WATER DOES NOT FLOW IN

- The inflow pipe is kinked.
- The tap is not open.
- The nylon filters are obstructed.

THE MACHINE DOES NOT TAKE IN THE ACID

- The tube is blocked.
- The acid tank is empty.

THE MACHINE DOES NOT TAKE IN THE DETERGENT

- The tube is blocked.
- The detergent tank is empty.

THE MACHINE DOES NOT START

- Close the door.
- It is not plugged in.
- The plug is faulty.
- There is a mains failure.
- Check the circuit breaker.

THE MACHINE DOES NOT DRAIN

- The drainage pipe is kinked.
- The drainage pump or its ducts are obstructed.
- The basin filters have been incorrectly replaced.

ABNORMAL NOISE AT THE BEGINNING OF WASH

- Items are flying in the basin under the pressure of the water.
- One of the wash arms is touching an item.





*high performance washing systems  
for science health and industry*

**For the attention of the Department Manager**

Dear Sir/Madam,

Thank you for purchasing a Lancer Washing Machine. It has been built with care to provide the high standard of performance and results demanded from professionals, with user-friendliness, reliability and quality being fundamental aspects of its design and production. All Lancer models are CE marked, demonstrating compliance with the latest European directives for quality and safety. The manufacturing operation is ISO9002 certified.

With your machine we are pleased to supply a '**free of charge**' starting pack of 10 litres of Detergent, 10 litres of Acid Rinse Additive, a can of Stainless Steel Cleaner & Polish and if applicable, 5 litres of Rinse Acid & Lubricant. Under CHIP regulations we are obliged to send you **Health & Safety Data Sheets** for these products. **These are enclosed - please acknowledge on the form supplied as required by law.**

Our chemical cleaning compounds have been specially formulated to give the best possible results from Lancer washing machines. Using some other makes of cleaning chemicals has caused an array of problems in the past and so we strongly recommend that you use only Lancer products for continuing, trouble-free good results. Though it is unlikely, should problems or damage to the machine arise from using a non-Lancer product during the guarantee period, we reserve the right to charge for call-out and repair.

*To re-order cleaning chemicals please contact us on 01223 861665 (tel) or 01223 861990 (fax) and ask for our Sales Order department.* Discounts are available for standing orders or high volume.

We trust you will have many years of contented use.

Yours faithfully,

For and on behalf of Lancer UK Limited

Date:

F.A.O. Health & Safety Manager/Technical Manager/Buyer

Dear Sir,

**CHEMICALS (HAZARD INFORMATION & PACKAGING) REGULATIONS 1994**

In accordance with the above Act, we are obliged to ensure that you are in possession of Health & Safety Data Sheets for all the products that we supply to you. Currently our records show the following products (as ticked) and accordingly we enclose the relevant data sheets which should replace any you already have on file.

*Please tick*

- |   |                                     |
|---|-------------------------------------|
| i) Lancerclean - Laboratory Machine Detergent                           | <input checked="" type="checkbox"/> |
| ii) Lancerinse - Machine Acid Rinse Additive                            | <input checked="" type="checkbox"/> |
| iii) Lancerwash - Hospital Machine Detergent                            | <input checked="" type="checkbox"/> |
| iv) Lancerlube - Machine Rinse Aid & Lubricant for surgical instruments | <input checked="" type="checkbox"/> |
| v) Lancer Lab D.D. - Decontaminant Detergent                            | <input checked="" type="checkbox"/> |
| vi) Lancershine - Stainless Steel Cleaner & Polish                      | <input checked="" type="checkbox"/> |
| vii) Lancerzyme - Enzyme Formula Detergent                              | <input checked="" type="checkbox"/> |

In the future data sheets will be updated and sent out to you if there has been any change to a product and also a data sheet will sent for any new product that we supply to you.

If you are not the person who is responsible for Health & Safety for your company, it is your duty to pass on this letter and enclosures to the relevant person.

In accordance with the law, please sign the attached receipt letter and return to us as confirmation that you have received these data sheets.

If you require any further copies please do not hesitate to contact us.

Thank you in anticipation.

Yours faithfully,

Information Officer

PLEASE RETURN TO:

The Information Officer  
Lancer UK Limited  
1 Pembroke Avenue  
Waterbeach  
Cambridge CB5 9QR

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I confirm that I have received data sheets for the following products:

*Please tick*

- |   |                              |                             |
|---|------------------------------|-----------------------------|
| i) Lancerclean - Laboratory Machine Detergent (ref: LCD10/25)                         | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| ii) Lancerinse - Machine Acid Rinse Additive (ref: LCA10/25)                          | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| iii) Lancerwash - Hospital Machine Detergent (ref: LHD10/25)                          | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| iv) Lancerlube- Machine Rinse Aid & Lubricant for surgical instruments (ref: LIL5/10) | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| v) Lancer Lab D.D. - Decontaminant Detergent (ref: LDD1/5)                            | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| vi) Lancershine - Stainless Steel Cleaner & Polish (ref: LSSC)                        | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| vii) Lancerzyme - Enzyme Formula Machine Detergent (ref: LED1/5/10)                   | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
- 

Company:

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Address:

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Name:

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Position:

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Signed:

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Date:

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**THANK YOU FOR YOUR CO-OPERATION!**

## HEALTH AND SAFETY DATA SHEET

### Identification of Preparation and Company

**Product Name:** Lancerzyme Enzyme Formula Hospital Detergent  
**Product Code:** NH128  
**Catalogue Code Prefix:** LED  
**Review / Issue No:** 2  
**Review / Issue Date:** 14/05/98  
**Supplier:** Lancer UK Ltd  
**Address:** 1 Pembroke Avenue, Waterbeach, Cambridge CB5 9QR  
**Telephone No:** 01223 861665  
**Fax No:** 01223 861990

### Composition/Information on Ingredients

Component	Classification	Concentration	Risk Phrases
Isopropyl alcohol	Highly flammable	5→15%	R11 Highly Flammable
Non-ionic Surfactant	Irritant	<5%	R36 Irritating to the eyes
Anionic Surfactant	Irritant	<1%	R36/38 Irritating to eyes and skin

### Hazards Identification

**Classification:** Not classified as hazardous for supply under Chemicals (Hazard Information and Packaging for Supply)(Amendment) Regulations 1996.  
**Health Hazards:** This product contains components classified as Irritant and Harmful.  
**Environmental Hazards:** The detergent components in this product are biodegradable.

### First Aid Measures

**Eye Contact:** Wash with plenty of water and seek medical advice.  
**Skin Contact:** Wash with plenty of water. Seek medical advice if any irritation persists.  
**Ingestion:** Give water or milk to drink. Discourage vomiting and seek medical advice.  
**Inhalation:** N/A

### Fire Fighting Measures

**Extinguishing Media:** Use any available extinguisher.  
**Special Procedures:** No special procedures necessary.  
**Protective Equipment:** Wear full fire protective equipment, including gloves, goggles overalls and respiratory protective equipment.

### Accidental Release Measures

**Personal Precautions:** Wear gloves, goggles and waterproof overalls. In confined areas wear respiratory protective equipment. Remove or shut off all possible sources of ignition. Do not smoke.  
**Environmental Precautions:** Do not allow large quantities to enter surface waters. Absorb with sand or other suitable absorbent media, and dispose of to an approved land fill site. Contact local authorities for further information.  
**Clean Up:** Flush away with copious amounts of water.  
 For large spillages inform local authorities.

### Handling And Storage

**Handling:** Avoid Contact with skin and eyes  
**Storage:** Protect from extremes of temperature.

### Exposure Controls/Personal Protection

**Exposure Controls:** Isopropyl alcohol is assigned an OES of 1225mg/m3.  
**Respiratory Protection:** Not required in normal use. In emergency situations wear vapour absorbing respiratory protective equipment.  
**Hand Protection:** Wear rubber or PVC gloves as a precautionary measure.  
**Eye Protection:** Not required for normal use.  
**Skin Protection:** Not required for normal use.

## HEALTH AND SAFETY DATA SHEET

### Identification of Preparation and Company

**Product Name:** Lancer Lab DD  
**Product Code:** IC042  
**Catalogue Code Prefix:** LDD  
**Review / Issue No:** 4  
**Review / Issue Date:** 03/06/96  
**Supplier:** Lancer UK Limited  
**Address:** 1 Pembroke Avenue, Waterbeach, Cambridge CB5 9QR  
**Telephone No:** 01223 861665  
**Fax No:** 01223 861990

### Composition/Information on Ingredients

Component	Classification	Concentration	Risk Phrases
Sodium Hydroxide	Corrosive	< 2%	R35 Causes severe burns
Non-ionic Surfactant	Harmful Irritant	5→10%	R22 Harmful if swallowed R36/38 Irritating to eyes and skin
Anionic Surfactant	Irritant	< 2%	R36/38 Irritating to eyes and skin
Sequestrant	Irritant	5→10%	R36 Irritating to the eyes

### Hazards Identification

**Classification:** This product is classified as Irritant under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994.  
**Health Hazards:** This product is irritating to the eyes and skin. Sodium hydroxide is assigned an OES of 2mg/m3.  
**Environmental Hazards:** The detergent components in this product are biodegradable. The neat product will harm plants and animals.

### First Aid Measures

**Eye Contact:** Wash with plenty of water and seek immediate medical advice.  
**Skin Contact:** Wash with plenty of water. Seek immediate medical advice if any irritation persists.  
**Ingestion:** Give water or milk to drink. Discourage vomiting and seek immediate medical advice.  
**Inhalation:** N/A

### Fire Fighting Measures

**Extinguishing Media:** Use any available extinguisher.  
**Special Procedures:** Wear suitable protective clothing.  
**Protective Equipment:** Wear gloves, goggles, chemical /fire resistant overalls and boots, and approved respiratory protective equipment.

### Accidental Release Measures

**Personal Precautions:** For large spillages wear gloves, goggles, chemical resistant overalls and boots. If working in a confined area with inadequate ventilation wear approved respiratory protective equipment.  
**Environmental Precautions:** Do not allow large quantities to enter surface waters. Absorb with sand or other suitable absorbent media, and dispose of to an approved land fill site. Contact local authorities for further information.  
**Clean Up:** Flush away with copious amounts of water.  
 For large spillages inform local authorities.

### Handling And Storage

**Handling:** Avoid Contact with skin and eyes  
**Storage:** Protect from extremes of temperature.

### Exposure Controls/Personal Protection

**Exposure Controls:** Sodium hydroxide is assigned an OES of 2mg/m3.  
**Respiratory Protection:** Not required in normal use.  
**Hand Protection:** Wear rubber or PVC gloves.

## HEALTH AND SAFETY DATA SHEET

### Identification of Preparation and Company

**Product Name:** Lancerwash Hospital Detergent  
**Product Code:** IC011  
**Catalogue Code Prefix:** LHD  
**Review / Issue No:** 4  
**Review / Issue Date:** 03/06/96  
**Supplier:** Lancer UK Limited  
**Address:** 1 Pembroke Avenue, Waterbeach, Cambridge CB5 9QR  
**Telephone No:** 01223 861665  
**Fax No:** 01223 861990

### Composition/Information on Ingredients

Component	Classification	Concentration	Risk Phrases
Sodium Metasilicate	Corrosive	5→15%	R34 Causes burns
Potassium Silicate	Irritant	5→15%	R41 Risk of serious damage to eyes
NTA	Irritant	<5%	R36 Irritating to the eyes

### Hazards Identification

**Classification:** This product is classified as Irritant under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994.  
**Health Hazards:** Risk of serious damage to eyes, irritating to skin.  
**Environmental Hazards:** The neat product will cause damage to plant and animal life. Once diluted the product is biodegradable.

### First Aid Measures

**Eye Contact:** Wash with plenty of water and seek immediate medical advice.  
**Skin Contact:** Wash with plenty of water and seek medical advice if any irritation persists.  
**Ingestion:** Give water or milk to drink. Discourage vomiting and seek medical advice.  
**Inhalation:** N/A

### Fire Fighting Measures

**Extinguishing Media:** Use any available extinguisher.  
**Special Procedures:** Product is not flammable, no special procedures required.  
**Protective Equipment:** Wear gloves, goggles and waterproof clothing.

### idental Release Measures

**Personal Precautions:** Wear gloves, goggles, waterproof clothing and waterproof boots.  
**Environmental Precautions:** Do not allow large quantities to enter surface waters. Absorb with sand or other suitable absorbent media, and dispose of to an approved land fill site. Contact local authorities for further information.  
**Clean Up:** Flush away with copious amounts of water.  
 For large spillages inform local authorities.

### Handling And Storage

**Handling:** Avoid Contact with skin and eyes, wear suitable protective clothing.  
**Storage:** Protect from extremes of temperature.

### Exposure Controls/Personal Protection

**Exposure Controls:** Sodium Metasilicate is assigned an OES of 2mg/M<sup>3</sup>  
 Potassium Silicate is assigned an OES of 2mg/M<sup>3</sup>  
**Respiratory Protection:** Not required in normal use.  
**Hand Protection:** Wear rubber or PVC gloves.  
**Eye Protection:** Wear safety goggles  
**Skin Protection:** Wear overalls and impervious foot ware.

## HEALTH AND SAFETY DATA SHEET

### Identification of Preparation and Company

**Product Name:** Lancerclean Detergent  
**Product Code:** CC012  
**Catalogue Code Prefix:** LCD  
**Review / Issue No:** 4  
**Review / Issue Date:** 03/06/96  
**Supplier:** Lancer UK Ltd  
**Address:** 1 Pembroke Avenue, Waterbeach, Cambridge CB5 9QR  
**Telephone No:** 01223 861665  
**Fax No:** 01223 861990

### Composition/Information on Ingredients

Component	Classification	Concentration	Risk Phrases
Sodium Hydroxide	Corrosive	< 5%	R35 Causes severe burns
Nitrilo Triacetic Acid, Trisodium Salt	Irritant	10→15%	R36 Irritating to the eyes
Acidic Phosphonate	Irritant	< 0.5%	R36/38 Irritating to eyes and skin

### Hazards Identification

**Classification:** This product is classified as Corrosive under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994.  
**Health Hazards:** The product causes burns to the skin, eyes and respiratory system. Sodium hydroxide is assigned an OES of 2 mg/m<sup>3</sup>.  
**Environmental Hazards:** The detergent materials in this product are biodegradable. The neat product is corrosive to plants and animals.

### First Aid Measures

**Eye Contact:** Wash with plenty of water and seek immediate medical advice.  
**Skin Contact:** Wash with plenty of water. Seek immediate medical advice if any irritation persists.  
**Ingestion:** Give water or milk to drink. Discourage vomiting and seek immediate medical advice.  
**Inhalation:** Remove the casualty from exposure and seek medical attention.

### Fire Fighting Measures

**Extinguishing Media:** Use any available extinguisher.  
**Special Procedures:** Wear suitable protective clothing.  
**Protective Equipment:** Wear gloves, goggles, chemical/fire resistant overalls, boots and approved respiratory protective equipment.

### Accidental Release Measures

**Personal Precautions:** Wear gloves, goggles, chemical resistant overalls/boots, and approved respiratory protective equipment.  
**Environmental Precautions:** Do not allow large quantities to enter surface waters. Absorb with sand or other suitable absorbent media, and dispose of to an approved land fill site. Contact local authorities for further information.  
**Clean Up:** Flush away with copious amounts of water.  
 For large spillages inform local authorities.

### Handling And Storage

**Handling:** Avoid Contact with skin and eyes  
**Storage:** Protect from extremes of temperature.

### Exposure Controls/Personal Protection

**Exposure Controls:** This product contains sodium hydroxide assigned an OES of 2mg/m<sup>3</sup>.  
**Respiratory Protection:** In emergency situations, or if handling large quantities of neat material, wear an alkali absorbent full facial breathing mask.  
**Hand Protection:** Wear rubber or PVC gloves at all times.  
**Eye Protection:** Wear chemical resistant goggles.  
**Skin Protection:** Wear chemical resistant overalls and boots.

## HEALTH AND SAFETY DATA SHEET

### Identification of Preparation and Company

**Product Name:** Lancerinse, Lancer Acid.  
**Product Code:** IA010  
**Catalogue Code Prefix:** LCA  
**Review / Issue No:** 4  
**Review / Issue Date:** 07/07/99  
**Supplier:** Lancer UK Limited  
**Address:** 1 Pembroke Avenue, Waterbeach, Cambridge CB5 9QR  
**Telephone No:** 01223 861665  
**Fax No:** 01223 861990

### Composition/Information on Ingredients

Component	Classification	Concentration	Risk Phrases
Acetic Acid	Corrosive	20%	R35 Causes severe burns R10 Flammable

### Hazards Identification

**Classification:** This product is classified as Irritant under Chemicals (Hazard Information and Packaging for Supply) (Amendment) Regulations 1999.  
**Health Hazards:** Acetic acid is assigned an OES of 37mg/m<sup>3</sup>. This product is irritating to the eyes and skin.  
**Environmental Hazards:** The neat material will harm plant and animal life.

### First Aid Measures

**Eye Contact:** Wash with plenty of water and seek immediate medical advice.  
**Skin Contact:** Wash with plenty of water. Seek immediate medical advice if any irritation persists.  
**Ingestion:** Give water or milk to drink. Discourage vomiting and seek immediate medical advice.  
**Inhalation:** N/A

### Fire Fighting Measures

**Extinguishing Media:** Use any available extinguisher.  
**Special Procedures:** Wear suitable protective clothing.  
**Protective Equipment:** Wear gloves, goggles, fire/chemical resistant overalls and approved respiratory protective equipment.

### Accidental Release Measures

**Personal Precautions:** For large spillages wear gloves, goggles, and chemical resistant overalls and boots. If working in a confined area with inadequate ventilation wear approved respiratory protective equipment.  
**Environmental Precautions:** Do not allow large quantities to enter surface waters. Absorb with sand or other suitable absorbent media, and dispose of to an approved land fill site. Contact local authorities for further information.  
**Clean Up:** Flush away with copious amounts of water.  
 For large spillages inform local authorities.

### Handling And Storage

**Handling:** Avoid Contact with skin and eyes  
**Storage:** Protect from extremes of temperature.

### Exposure Controls/Personal Protection

**Exposure Controls:** Acetic acid is assigned an OES of 37mg/m<sup>3</sup>.  
**Respiratory Protection:** Not required for normal use. When handling large quantities of neat material wear an acid absorbent full facial respiratory protective mask.  
**Hand Protection:** Wear rubber or PVC gloves.  
**Eye Protection:** Wear chemical resistant goggles.  
**Skin Protection:** Wear chemical resistant overalls.



# HEALTH AND SAFETY DATA SHEET



## Identification of Preparation and Company

Product Name: Lancershine Stainless Steel Cleaner & Polish  
Product Code: GC5710  
Catalogue Code Prefix: LSSC  
Review / Issue No: 2  
Review / Issue Date: 01/10/98  
Supplier: Lancer UK Ltd  
Address: 1 Pembroke Avenue, Waterbeach, Cambridge CB5 9QR  
Telephone No: 01223 861665  
Fax No: 01223 861990

## Composition/Information on Ingredients

Component	Classification	Concentration	Risk Phrases
Hydrocarbon Distillate (F)	Irritant	30→50%	R65 Harmful: May cause lung damage if swallowed.
Liquefied Petroleum Gas	Not Classifiable	15→30%	
Mineral Oil			

Composition Comments: Blend of hydrocarbon distillate and mineral oil. Aerosol propelled by liquefied petroleum gas.

## Hazards Identification

Classification: Classified as extremely flammable.  
Health Hazards: For aspiration effects see other information. Hydrocarbon distillate (F) and liquefied petroleum have OES's of 500mg/m<sup>3</sup> and 1250mg/m<sup>3</sup> for short term exposure (10 min). OES values for long term (8 hrs) exposure are 400mg/m<sup>3</sup> and 1000mg/m<sup>3</sup> respectively.  
Environmental Hazards: No specific environmental information available.

## First Aid Measures

Eye Contact: Wash with plenty of water for at least 15mins. Seek immediate medical advice if any irritation persists.  
Skin Contact: Wash with soap or mild detergent and water. Seek immediate medical advice if any irritation persists.  
Ingestion: Rinse mouth thoroughly with water. Give large amounts of water/milk. Contact physician if large quantity has been consumed.  
Inhalation: Remove to fresh air. Seek immediate medical advice if any irritation persists.

## Fighting Measures

Extinguishing Media: Powder, foam or CO<sub>2</sub> extinguishers may be used.  
Special Procedures: Use water extinguishers to keep fire exposed containers cool and disperse vapours. Possible risk of container rupture when exposed to fire/high temperatures. Contents of aerosol will add to fuelling of fire. Fire or high temperatures can create hazardous decomposition products (oxide of carbon).  
Protective Equipment: Breathing apparatus should be worn if exposure to fumes is likely.

## Accidental Release Measures

Personal Precautions: Remove all sources of ignition.  
Environmental Precautions: No specific environmental information available  
Clean Up: Absorb with sand or other suitable non-flammable absorbent media, and dispose of in a suitable container.

## Handling And Storage

Handling: Avoid contact with skin and eyes. The use of a barrier cream is recommended but not as a substitute for gloves. Keep away from heat, sparks and open flames.  
Storage: Caution: Pressurised container. Do not expose to temperatures exceeding 50°C. Do not puncture or incinerate even when empty. Do not spray onto naked flame or any incandescent material. Keep away from heat, sparks and open flames. Store in a cool, dry place away from all sources of heat including direct sunlight.

## HEALTH AND SAFETY DATA SHEET

### Identification of Preparation and Company

**Product Name:** Lancerfinish  
**Product Code:** NH223  
**Catalogue Code Prefix:** LIL  
**Review / Issue No:** 1  
**Review / Issue Date:** 11/05/2000  
**Supplier:** Lancer UK Limited  
**Address:** 1 Pembroke Avenue, Waterbeach, Cambridge CB5 9QR  
**Telephone No:** 01223 861665  
**Fax No:** 01223 861990

### Composition/Information on Ingredients

Component	Classification	Concentration	Risk Phrases
Isopropyl Alcohol	Highly Flammable	< 5%	R11 Highly Flammable
Anionic Surfactant	Irritant	< 5%	R36/38 Irritating to eyes and skin
Non-ionic Surfactant	Dangerous for the Environment	10→15%	R50 Very toxic to aquatic organisms

### Hazards Identification

**Classification:** Not classified as hazardous under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994.  
**Health Hazards:** Isopropyl alcohol is assigned an OES of 1225mg/m3.  
**Environmental Hazards:** This product contains material classified as 'Dangerous for the Environment' - very toxic to aquatic organisms.

### First Aid Measures

**Eye Contact:** Wash with plenty of water and seek medical advice.  
**Skin Contact:** Wash with plenty of water. Seek medical advice if any irritation persists.  
**Ingestion:** Give water or milk to drink. Discourage vomiting and seek medical advice.  
**Inhalation:** N/A

### Fire Fighting Measures

**Extinguishing Media:** Use any available extinguisher.  
**Special Procedures:** Wear suitable protective clothing.  
**Protective Equipment:** Wear gloves, goggles, fire resistant overalls and approved respiratory protective equipment.

### Accidental Release Measures

**Personal Precautions:** For large spillages wear gloves, goggles and waterproof overalls. If working in a confined area with inadequate ventilation wear approved respiratory protective equipment.  
**Environmental Precautions:** Do not allow large quantities to enter surface waters. Absorb with sand or other suitable absorbent media, and dispose of to an approved land fill site. Contact local authorities for further information.  
**Clean Up:** Flush away with copious amounts of water.  
 For large spillages inform local authorities.

### Handling And Storage

**Handling:** Avoid Contact with skin and eyes  
**Storage:** Protect from extremes of temperature.

### Exposure Controls/Personal Protection

**Exposure Controls:** Isopropyl alcohol is assigned an OES of 1225mg/m3.  
**Respiratory Protection:** Not required for normal use.  
**Hand Protection:** Rubber gloves may be worn as a precautionary measure.  
**Eye Protection:** Not required for normal use.  
**Skin Protection:** Not required for normal use.

## HEALTH AND SAFETY DATA SHEET

### Identification of Preparation and Company

**Product Name:** DLC Endoscope Detergent  
**Product Code:** IC011  
**Catalogue Code Prefix:** DLC  
**Review / Issue No:** 1  
**Review / Issue Date:** 02/08/01  
**Supplier:** Lancer UK Limited  
**Address:** 1 Pembroke Avenue, Waterbeach, Cambridge CB5 9QR  
**Telephone No:** 01223 861665  
**Fax No:** 01223 861990

### Composition/Information on Ingredients

Component	Classification	Concentration	Risk Phrases
Sodium Metasilicate	Corrosive	5 15%	R34 Causes burns
Potassium Silicate	Irritant	5 15%	R41 Risk of serious damage to eyes
NTA	Irritant	<5%	R36 Irritating to the eyes

### Hazards Identification

**Classification:** This product is classified as Irritant under Chemicals (Hazard Information and Packaging for Supply) Regulations 1994.  
**Health Hazards:** Risk of serious damage to eyes, irritating to skin.  
**Environmental Hazards:** The neat product will cause damage to plant and animal life. Once diluted the product is biodegradable.

### First Aid Measures

**Eye Contact:** Wash with plenty of water and seek immediate medical advice.  
**Skin Contact:** Wash with plenty of water and seek medical advice if any irritation persists.  
**Ingestion:** Give water or milk to drink. Discourage vomiting and seek medical advice.  
**Inhalation:** N/A

### Fire Fighting Measures

**Extinguishing Media:** Use any available extinguisher.  
**Special Procedures:** Product is not flammable, no special procedures required.  
**Protective Equipment:** Wear gloves, goggles and waterproof clothing.

### Accidental Release Measures

**Personal Precautions:** Wear gloves, goggles, waterproof clothing and waterproof boots.  
**Environmental Precautions:** Do not allow large quantities to enter surface waters. Absorb with sand or other suitable absorbent media, and dispose of to an approved land fill site. Contact local authorities for further information.  
**Clean Up:** Flush away with copious amounts of water.  
 For large spillages inform local authorities.

### Handling And Storage

**Handling:** Avoid Contact with skin and eyes, wear suitable protective clothing.  
**Storage:** Protect from extremes of temperature.

### Exposure Controls/Personal Protection

**Exposure Controls:** Sodium Metasilicate is assigned an OES of 2mg/M<sup>3</sup>  
 Potassium Silicate is assigned an OES of 2mg/M<sup>3</sup>  
**Respiratory Protection:** Not required in normal use.  
**Hand Protection:** Wear rubber or PVC gloves.  
**Eye Protection:** Wear safety goggles  
**Skin Protection:** Wear overalls and impervious foot ware.

## HEALTH AND SAFETY DATA SHEET

### Identification of Preparation and Company

**Product Name:** Aperlan Endoscope Disinfectant  
**Product Code:** APER GB/NL  
**Catalogue Code Prefix:**  
**Review / Issue No:** 1  
**Review / Issue Date:** 06/09/00  
**Manufacturer:** Lancer Industrie SA  
**Supplier:** Lancer UK Ltd  
**Address:** 1 Pembroke Avenue, Waterbeach, Cambridge CB5 9QR  
**Telephone No:** 01223 861665  
**Fax No:** 01223 861990

### Composition Information on Ingredients

Component	Classification	Concentration	Risk Phrases
Peracetic acid	Irritant	1 → 5%	R36/37/38 Irritating to eyes, respiratory system and skin.
Hydrogen peroxide	Irritant	5 → 20%	R36/38 Irritating to eyes and skin
Acetic acid	Irritant	10 → 25%	R36/38 Irritating to eyes and skin

### Hazards Identification

**Classification:** This product is classified as an Irritant under Chemicals (Hazard Information and Packing for supply) Regulations 1994.  
**Health Hazards:** This product causes irritation to eyes, respiratory system and skin.  
**Environmental Hazards:** Dilution of Aperlan with water renders it harmless to the environment.

### First Aid Measures

**Eye Contact:** Rinse immediately with plenty of water. Consult a specialist.  
**Skin Contact:** Rinse with plenty of water. If an irritation occurs and persists, consult a doctor.  
**Ingestion:** Do not induce vomiting. Do not give anything by mouth to an unconscious person. If a feeling of sickness occurs and persists, consult a doctor.  
**Inhalation:** Remove to fresh air. If breathing remains difficult, seek medical attention.

### Fire Fighting Measures

**Extinguishing Media:** Material is not flammable.  
**Special Procedures:** -  
**Special Fire Protective Measures:** In case of fire nearby, cool the containers with water spray.

### Accidental Release Measures

**Personal Precautions:** Avoid contact with eyes, remove incompatible materials and take personal protective measures shown below.  
**Environmental Precautions:** Do not discharge the product to sewers or water sources.  
**Clean Up:** Contain and absorb spill with inert material eg., sand. Place absorbent material into separate container for disposal. Rinse traces left with water and recover for disposal.

### Handling and Storage

**Handling:** Do not return unused product in the original containers. Do not blend with another product. Respect conditions of use  
**Storage:** Store at room temperature between 15°C and 30°C. Protect from light. Store in closed containers. Store exclusively in original containers.  
**Individual Precautions:** Avoid contact with eyes. Take the individual protective measures listed below. Provide an eye wash facility nearby.  
**Incompatible Materials:** Hypochlorites, aldehydes, reducing agents, combustibles, bases, metals.

**INSTALLATION  
AND USER'S MANUAL  
910 UP**

# **INSTALLATION MANUAL**

## **910 UP**

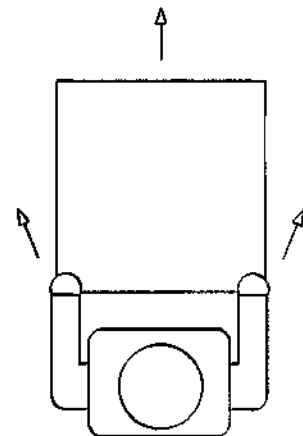
## INSTALLATION OF THE WASHER

- Remove the box.
- Remove the screws located under the pallet.
- Remove the plastic film.
- Open the door of the washer: pull handle towards you and lower the door in the horizontal position.

For the washers equipped with a door locking system, lift the door catches at the handle with a screwdriver.

- Take the adjustable feet out of the chamber.
- Lean the washer forward and screw the feet.
- Put the washer where it will be used.

To move the washer put your hands on each side of the cover.



Adjust the four adjustable-height feet so that your appliance is “ LEVEL”.

## **PRECAUTIONS TO BE TAKEN BEFORE USE**

- Users must be trained before using the washer-dryer.
- The staff that use or repair this washer-dryer must have followed a complete training referring its use and maintenance. This training must include the selection and understanding of the washing cycle, the loading and unloading of the baskets and the handling of the washing products.
- The staff in contact with the detergent products and its emanations, which could be used in this washer-dryer, must have knowledge of the safety data sheet of the used products as well as the detailed instructions about the dangers and the detection of toxic product leaks.
- The training of the users and technicians must be done regularly and always before the first use of the washer-dryer. A written register of these trainings must be kept in order to prove the presence and the understanding of the interested parties.





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## CHAPTER 1 INTRODUCTION

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### 1. UP RANGE FOR LABORATORY

This appliance is one of the most highly perfected on the market. It ensures a washing by mechanical, thermal and chemical (use of a detergent).

The UP range is a washer-dryer range conceived specially by LANCER in order to assure the washing and the drying of glassware , laboratory material of chemistry, bacteriology, virology, analysis...

### 2. USER'S MANUAL

The present manual is destined to facilitate the operations of use, handle, maintenance and repair.

This only concerns the operations to be done by an user.

Before using your washer-dryer and in order to obtain the best service read carefully the following advices and recommendations. Follow them, as they have been written in your interest.

Respecting the precautionary measures of use, the washer-dryer must only be used for the washing operations described in the manual.

All over this manual, we have incorporated brief comments and icons to help you locate the important information.

When you see this icon, it means:

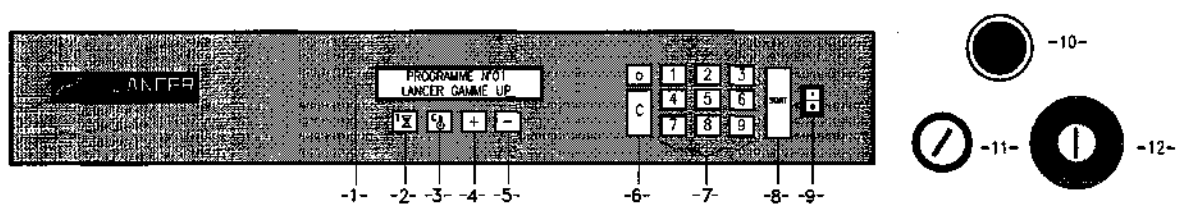


: ATTENTION !! PAY SPECIAL ATTENTION !!

## CHAPTER 2 BEFORE YOU START

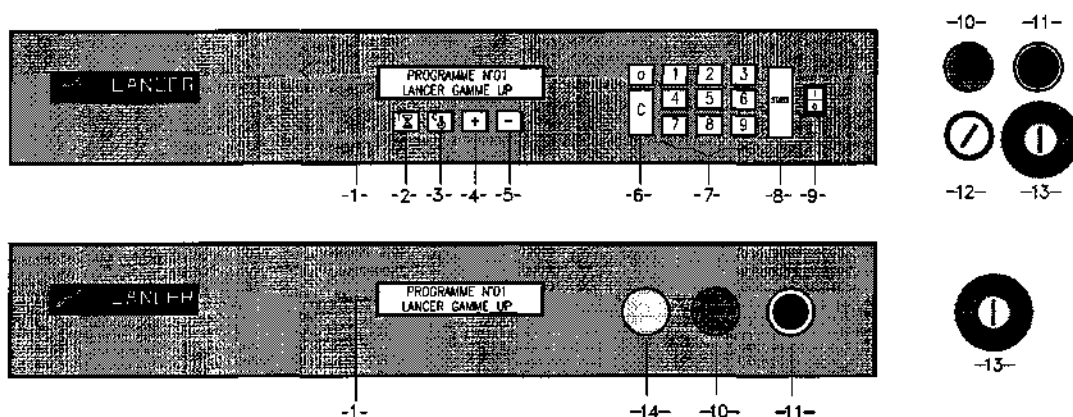
### 1. PRESENTATION OF THE CONTROL PANEL

#### 1.1 SINGLE DOOR CONTROL PANEL



-1-	DISPLAY	-8-	KEY "START"
-2-	TIME KEY	-9-	KEY "SWITCH ON / OFF"
-3-	TEMPERATURE KEY	-10-	DOOR OPENING KEY (OPTION : ONLY ON WASHER WITH DOOR LOCKING - EXCEPT 1350 AND 1450 UPDIN-)
-4-	FUNCTION "+" KEY	-11-	KEY OVERRIDE (OPTION)
-5-	FUNCTION "-" KEY	-12-	EMERGENCY STOP (OPTION)
-6-	KEY "C"		
-7-	DIGITAL KEYPAD		

#### 1.2 DOUBLE DOOR CONTROL PANEL



-1-	DISPLAY	-8-	KEY "START"
-2-	TIME KEY	-9-	KEY "SWITCH ON / OFF"
-3-	TEMPERATURE KEY	-10-	OPEN DOOR LIGHT
-4-	FUNCTION "+" KEY	-11-	DOOR OPENING KEY
-5-	FUNCTION "-" KEY	-12-	KEY OVERRIDE (OPTION)
-6-	KEY "C"	-13-	EMERGENCY STOP (OPTION)
-7-	DIGITAL KEYPAD	-14-	END OF CYCLE LIGHT

## **2. OPENING OF THE DOOR(S)**

### **2.1 SINGLE DOOR**

Pull the handle towards you and lower the door in the horizontal position.

For the equipped with door locking system, switch on power and push on the door button **-10-** (see page 9) and pull the handle towards you and lower the door in the horizontal position.

### **2.2 DOUBLE DOOR**

This washer is equipped with a locking device that prevents opening the doors during the cycle.

When switching the on, it is possible to open the dirty side door.

Press the push-button **-11-** (see page 9) and pull the handle towards you and lower the door in the horizontal position. A red lamp lights on the other side of the washer. The 2nd door is locked.

When the washer is loaded and the door closed, washing cycle can begin.

At the end of the cycle, only door on the sterile side can be opened.

After having unloaded and closed the washer, the opposite door, on dirty side, can be manoeuvred for a further cycle.

### 3. SAFETY ADVICES

#### 3.1 PRECAUTIONS FOR USE



BEFORE START, VERIFY THAT THE TAPS OF ENTRANCE OF WATER ARE OPENED.



EVERY MAINTENANCE AND TECHNICAL INSTALLATION INTERVENTION MUST BE DONE BY A TECHNICIAN ENTITLED TO WORK UNDER TENSION.



BURN RISK IF THE DOOR IS OPENED OVER 60°C .  
AT THE END OF THE CYCLE, LET COOL THE SUPPORTS, BASKETS, ACCESORIES AND WASHED ITEMS BEFORE HANDLING THEM.

#### SAFETY INSTRUCTIONS LABEL ACCORDING THE STANDARDS :

- Only for UP range washers- dryers in conformity with the CE standard :

 TEMP. > 60°C	(D)	NICHT WÄHREND DEM SPÜLGANG ÖFFNEN
	(F)	NE PAS OUVRIR EN FONCTIONNEMENT
	(GB)	DO NOT OPEN WHEN FUNCTIONING
	(NL)	NIET OPENEN TIJDENS PROCES

- For UP range washers- dryers in conformity with the UL (for US) – cUL (for Canada) standards:





**AVOID** any accidental opening of the door during the cycle.

**BURN RISK** if the door is opened over 60°C.

At the end of cycle, allow the rack and washed items to cool before handling them.

#### Note

If the door is opened during operation, the washing cycle is stopped. The cycle is returned to its starting point. You should, therefore, repeat the cycle starting operations (see page 22).

Do not climb or sit on the doors.

Maximum charge allowed on the door is :

	WASHERS			
	910	1300	1400	1600
UP / UPSS	35 Kg	51 Kg	63 Kg	90 Kg
UP WITH PLINTH	43 Kg	X	X	X

### 3.2 UTILIZATION



It is strictly prohibited to use the washer in an explosive atmosphere or to use solvents, hydrocarbons, nitric acid, alcohols and derivatives, and any flammable products.

The use of following acids by ambient temperature is advised :

- acetic acid, (N.L.L.)
- phosphoric acid, (A.P.L.)

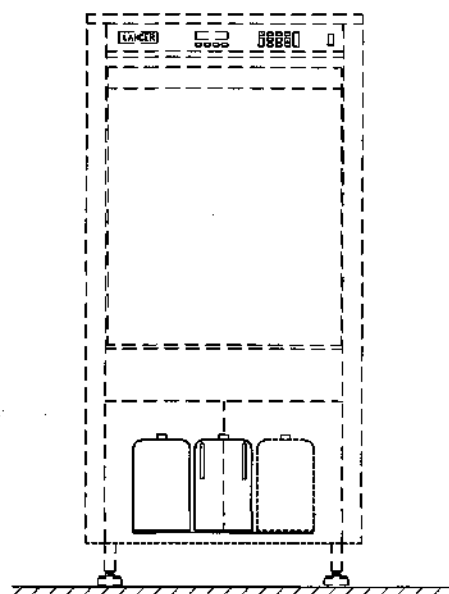
## 4. WHASHING PRODUCTS



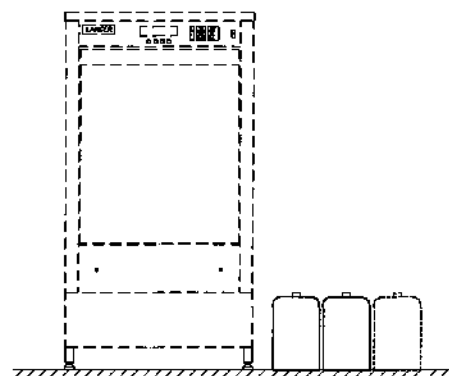
THE PROGRAMS PREESTABLISHED WITH THIS WASHER-DISINFECTOR HAVE BEEN VALIDATED WITH THE LANCER WASHING PRODUCTS.

### 4.2 PRODUCT TANK AREA

Some washers-disinfectors are equipped with a product tank casing located on front of washer (loading side for the double door washers)



For washers-disinfectors don't equipped with product tank casing, place containers near the washer at a maximum height of 150 mm above the floor level.



#### 4.3 INSTRUCTIONS TO RESPECT IN CASE OF HANDLING THE WASHING PRODUCTS



ANYBODY CALLED TO HANDLE THE WASHING PRODUCTS MUST BE INFORMED OF THE IMPLICATED RISKS TO THESE PRODUCTS.

#### 4.4 INSTRUCTIONS TO RESPECT IN CASE OF CHANGING THE PRODUCT FORMULA

When a product is changed by another one, it is imperative to rinse with water the circuit of the corresponding product before do the change.

Intake duration of the washing products in the programs must be modified in consequence.

#### 4.5 CHOICE OF NON-FOAMING DETERGENTS

The choice of non-foaming detergents is decisive.

The contamination must be dissolved or dispersed in order to ensure satisfactory washing.

The right detergent should be used for the materials to be washed. Please do not hesitate to consult us for advice.

## 4.6 CHANGE OF THE TANKS

### Before launching the cycle

Before launching the cycle, check product tank levels and change those with low levels so as to avoid bad washing or bad disinfection because of a lack of additive.

### At beginning of cycle *(only for washers with levels floats)*

When starting the cycle, in case of lack of product, a message of sound and visual alarm appears.

Example :



Switch the washer-disinfector OFF by pushing the key .


Use the necessary protections when handling the products (gloves, masks, glasses...) according to point 7 of the safety data sheet corresponding to the washing product.

Open the tank casing door and locate the tank to be changed.

Consider verify the level of the other product tanks to avoid a new alarm « LACK OF PRODUCT » in the next beginning of cycle.

Unscrew the stoppers and take off the product suction pipes, place them in a container.

Change the tank(s) and replace the suction pipe(s).

Switch the washer-disinfector ON by pushing the key .

During the cycle (only for washers with validation monitor)

During the cycle, in case of lack of product, a message of sound and visual alarm appears.


Example :



This mistake is also mentioned in the ticket.

Example :

PB IN THE DETERGENT INTAKE  
INCIDENT N°10

Switch the washer-disinfector OFF by pushing the key .

Please ask your maintenance service to leave this alarm.

## 5. PRINTER (OPTION)

### 5.1 PRINTER VERIFICATION

Before launching a cycle or printing again the ticket, check the quantity of paper in the roller of the printer

If a continual red trace appears, replace it by a new one (see *page 18*).

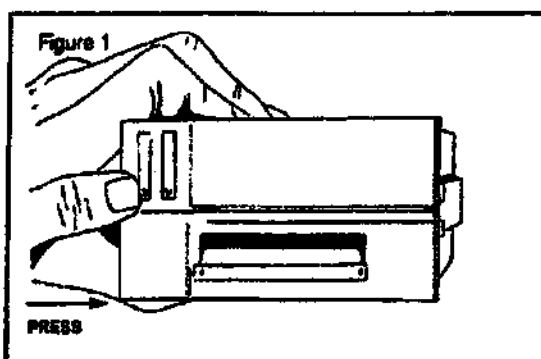
If the quality of the ink during the precedent impression of the ticket was not enough for a good reading, consider changing the ribbon of the printer (see *page 19*).

## 5.2 CHANGE OF THE PAPER ROLLER

There are two buttons on the front panel of the printer. One button operates the front door latch, the other controls the paper feed.

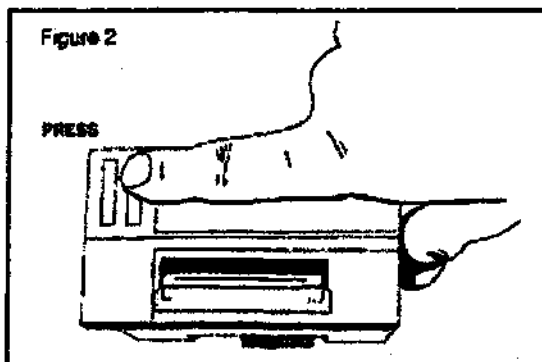
### Door Latch:

With the printer mounted in data mode attitude (paper emerging downwards) so that the two control buttons are at upper left, to open the front door of the printer, press the door latch (the outermost of the two buttons) sideways towards the other button, using thumb or forefinger (see Figure 1). This will release the latch and the door can be swung outwards to expose the paper roll.



### Paper Feed Button.

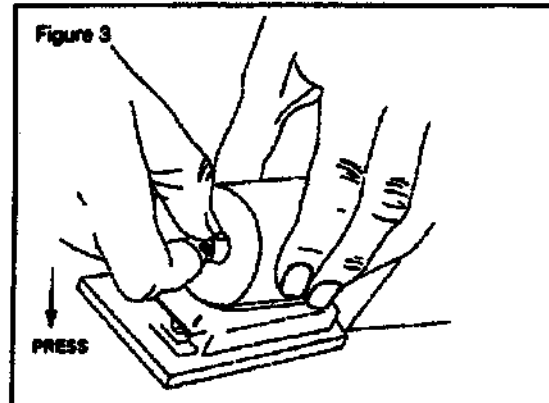
With the printer in data mode attitude press the top part of the innermost button to activate paper feed (see Figure 2). This will continue for as long as the button is held down.



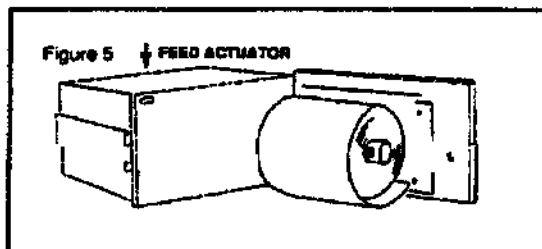
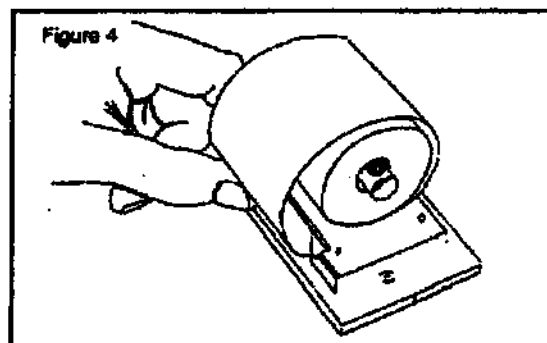
### Paper Roll Replacement:

Open the printer door as described above and swing the door open to expose the paper roll. If any paper remains in the printer, tear the end off against the paper tear bar and carefully pull the remaining paper backwards, from the rear of the mechanism mounting chassis, until the free end emerges. Press the paper roll retaining button inwards using the thumb and forefinger (see figure 3) and remove the empty roll.

Take a new roll of paper, and separate the end from the rest of the roll. Remove any damaged or gummed part of the paper, and cut the free end squarely with a pair of scissors or a knife, leaving a clean straight edge to present to the printer mechanism.



Thread the new roll past the retention button onto the spindle with the paper unspooling in an anticlockwise direction when viewed from the open end. (See Figure 4). Press the paper feed actuator arm (at upper left in data mode) until the mechanism grips the paper and pulls it through to the front of the printer. (See Figure 5).



Turn the paper roll so that any loose turns are wound snugly against the roll. Close the printer door.

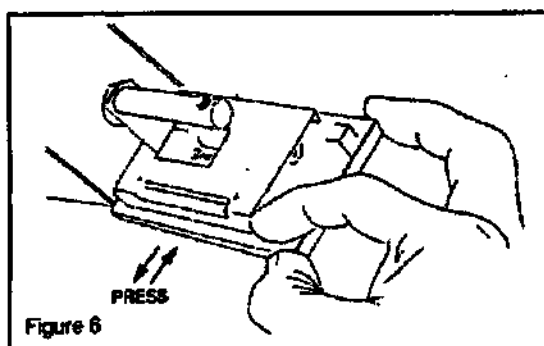
More paper may now be fed through by pressing the paper feed button on the front panel. (see Figure 2).

### 5.3 CHANGE OF THE RIBBON CARTRIDGE

#### Ribbon Cartridge Replacement:

Tear off any paper emerging from the printer.  
Open the printer door by pressing the door latch inwards.

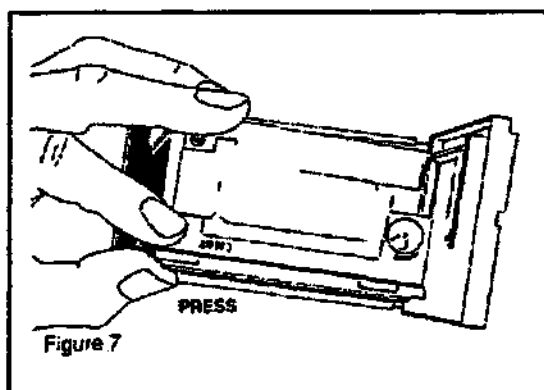
Place forefinger against the lower edge of the mechanism mounting chassis and thumb against the base of the door (see Figure 6).



Carefully press the door and chassis in vertically opposite directions until the catch is released. Do not pull the door and chassis apart without first releasing the catch.

Swing the chassis back, leaving the door fully open. This will expose the printer mechanism and ink ribbon cartridge.

Press down on the end of the ink ribbon cartridge marked 'PUSH' (see Figure 7) and carefully remove the used cartridge.

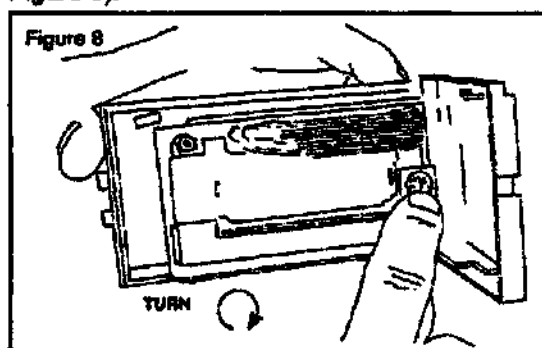


Fit a replacement cartridge, ensuring that the paper lies between the ribbon and the steel printer platen.

Check that the ribbon cartridge spindle is correctly seated over the printer ribbon drive shaft, and snap the cartridge into place.

Ensure that the ribbon is taut and parallel to the paper.

If necessary tighten the ribbon by turning the faceted disc clockwise using fingernail (see Figure 8).



If there is some paper protruding from the front of the printer mechanism, ensure that it will pass clearly through the guide channel and past the tear bar before snapping the chassis shut against the back of the door.

Turn the paper roll by hand so that any loose turns are wound snugly against the roll.

Close the door and check that the paper flows freely, using the paper feed button.

#### Consumables available

A consumables pack (Stock No. A160CBP) is available containing five 19m rolls of paper and two Epson ribbon cartridges. Use of this paper is recommended, as most paper rolls from other sources are too large to fit within the printer housing, and may be of inferior quality causing dust and wear.



## 6. USING OF THE ACCESSORIES

### 6.1 CHOICE OF ACCESSORIES, BASKETS AND RACKS

THE CHOICE OF ACCESSORIES, BASKETS AND RACKS IS VITAL.

In the case of flasks washing, it is very important that the flow rate of the injectors used must be lower than the flow capacity of the flasks to be washed in order to avoid gradual filling of the flasks during the washing cycle. A narrow neck hindering the fast draining of water gives mediocre results. The mechanical action of the jet is absorbed by the water contained in the glassware. It is indispensable to use baskets with injectors of suitable diameter and, above all, to secure lightweight items with a cover grille (GC) or an injector cover grille (GCI).

### 6.2 ITEMS TO BE WASHED

Place the items correctly on or in the baskets or racks so that they do not strike one against the other during the washing cycle. Check that they are correctly positioned, secure them with a cover grille (GC) or an injector cover grille (GCI).

You should only use baskets that are suitable for the parts to be washed. When your washer is put into service, our technicians will give you useful advice on the best way to load it.

Close the door, and the washing cycle can begin.

When several baskets are used simultaneously, maximum one baskets can be in position out of chamber on the door and the runners.

Maximum charge allowed on the intermediate runners is 26 Kg except 1600 range where the charge is 35 Kg.

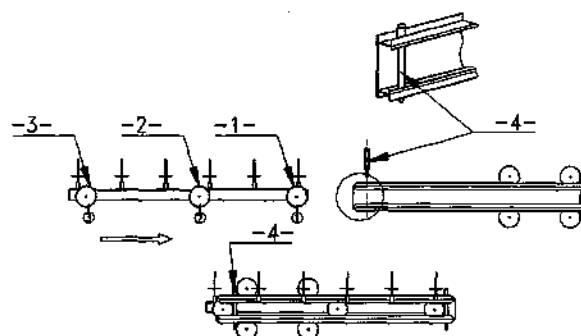


IF THE LOADINGS TO BE HANDLED ARE SUPERIOR TO 25 KG THERE IS PLACE TO USE A HANDLING SYSTEM.

## 7. UP – UPSS BASKETS RANGE

### FITTING THE BASKETS

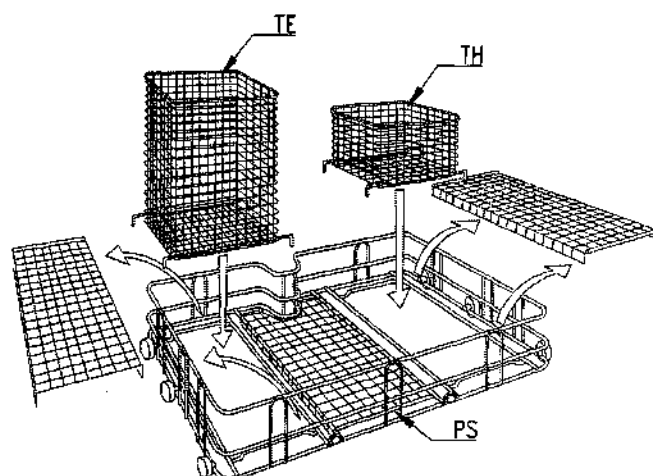
- Pull the slide rails out of the chamber.
- Remove the front pins.
- Insert wheels 1 and 2 of the basket in the slide rails.
- Fit the pins back in place between wheels 2 and 3.



1-2-3 ROULETTES DE PANIER  
4 GOUPILE

### FITTING BASKETS OF TYPE TE OR TH ON A BASKET OF TYPE PS OR PSB

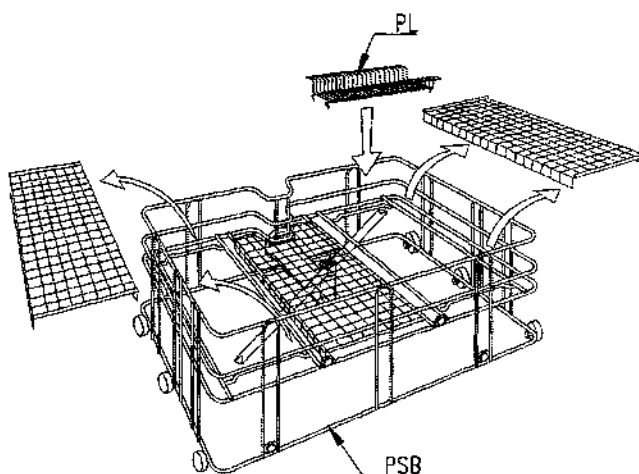
In order to wash items in baskets of type "TE" (for test tubes) or "TH" (for haemolysis tubes), place the baskets on the basket of type "PS" (single basket) or "PSB" (single basket with arm) after removing one or more "support grilles". Check that the catches are correctly fitted on the rods designed for that purpose. Reinstall the grilles for any washing operation that does not require the use of "TE" or "TH" type baskets.



Note : The single basket (PS) can be positioned only at the bottom level of the washer chamber where washing action is provided by the arm located at the bottom at the chamber. The single basket equipped with its own washing arm (PSB) is positioned at higher levels.

### FITTING BASKETS OF TYPE PL ON A BASKET OF TYPE PS OR PSB

In order to wash items in baskets of type "PL" (blade type baskets), these baskets should be fitted on the single basket (PS) or single basket with arm (PSB) after removing one or more "support grilles". Check that the catches are correctly fitted on the rods designed for that purpose. Reinstall the grilles for any washing operation that does not require the use of "PL" type baskets.



## CHAPTER 3 UTILIZATION

### 1. LAUNCHING OF A CYCLE

#### 1.1 SWITCHING ON

Push the key .

The display indicates the number of the last executed program and the type of washer-disinfector.

P	R	O	G	R	A	M	M	E	N	°	0	4
L	A	N	C	E	R	U	P	R	A	N	G	E

#### 1.2 CYCLE

The washer-disinfector is delivered with 4 pre-established programs at the factory (see page 44). Enter the number of the program to select the cycle, with the help of the keys of the numeric keypad.

##### PROGRAMME 01 : VOLUMETRIC FLASKS

- Prewash with hot softened water
- Wash with hot softened water (50°C) with the detergent.
- Rinse with running water
- Acid rinse with the neutralizant acid.
- Rinse with running water
- Last rinse with cold demineralised water
- Disinfection at 50° with the demineralized or osmosis-treated water.
- Drying

**PROGRAMME 02 : BACTERIOLOGY, VIROLOGY**

- Prewash with hot softened water
- Wash with hot softened water (85°C) with the detergent.
- Rinse with running water
- Acid rinse with the neutralizant acid.
- 2 Rinses with running water
- Disinfection at 80° with the demineralized or osmosis-treated water.
- Drying

**PROGRAMME 03 : CHEMISTRY, BIOLOGY**

- Prewash with hot softened water
- Wash with hot softened water (70°C) with the detergent.
- 2 Rinses with running water
- Acid rinse with the neutralizant acid.
- Rinse with running water
- Last rinse with cold demineralised water
- Disinfection at 80° with the demineralized or osmosis-treated water.
- Drying

**PROGRAMME 04 : GELOSE**

- Prewash with with hot softened water (90°C)
- A second prewash with hot softened water
- Wash with hot softened water (90°C) with the detergent
- 2 Rinses with running water
- Acid rinse with the neutralizant acid.
- Rinse with running water
- Rinse with running water
- Disinfection at 80° with the demineralized or osmosis-treated water.
- Drying

NOTE: other programs can be pre-established depending on their necessities (maximum 36).

### 1.3 STARTING THE CYCLE

Choose an appropriate cycle for the items to be washed.

Press the **START** push-button. There are 3 possibilities.

- a) The display indicates :
- the selected cycle number,
  - the temperature in the chamber,
  - the current function, "RESINS RINSE\*" or "PREWASH 1"

2	6					2	4	°	C		
P					R	E	W	A	S	H	1

The cycle will be carried out without requiring any further action.

\* *Only on washers with regeneration.*

- b) The display indicates :

A										L	A	R	M
S	A	L	T		R	E	C	H	A	R	G	E	

If there is a lack of product, salt (*for washer with regeneration*) or washing products (*for washer with level floats*), the message is displayed at the start of the cycle when you press the **START** key.

It is essential to fill the salt pot located inside of the washer, (*see page 56*) and or to fill the tanks of products.

- c) The display indicates :

F	U	L	L		B	A	S	I	N
E	M	P	T		I	N	G		

In the case the chamber contains water at the beginning of the cycle, either following the interruption of the previous cycle or due to an abnormal addition of water from outside).


The washer is emptied and the cycle then proceeds normally.


## 1.4 PERFORMANCE OF THE CYCLE

During the cycle, the display unit constantly shows :

- the number of the current programmed cycle,
- the temperature of the water or the air in the chamber,
- the name of the current function.







## 1.5 INFORMATION DURING THE CYCLE

During a cycle, it is possible in any moment to know the duration of a sequence in course by pushing the key time .

In the same way, an action on the key  gives the heating or drying programmed temperature.

If there is no heating in this sequence (ex : acid rinsing) or if the heating is programmed at 00°C, the answer will be "NO HEATING"









Besides, a simultaneous action on the keys.

-  and  will give the name of the phase in course,
-  and  will give the duration of this phase,
-  and  will give the estimated remaining duration of the program in course.

Note :

The estimated remaining time can only be read if the same cycle has already been fully carried out.

Examples :

KEYS	DISPLAY
	Duration = 01 mn
	Temperature = 40° C
 and 	Detergent
 and 	Duration = 0 mn 18 s
 and 	Estimated remaining duration = 48 mn

Special cases:

- For RUNNING WATER RINSE 1, RUNNING WATER RINSE 2, the duration of the phase is replaced by a number from 1 to 9.
- Throughout the filling phase, the display unit indicates "WAIT FOR LEVEL".

## 2. END OF CYCLE

### 2.1 OPENING OF THE DOORS



BURN RISK IF THE DOOR IS OPENED OVER 60°C.  
AT THE END OF THE CYCLE, LET COOL THE  
SUPPORTS, BASKETS, ACCESORIES AND WASHED  
OBJECTS BEFORE HANDLING THEM.

The display unit indicates "end of cycle".

E N D   O F  
C Y C L E

Remove and control the ticket delivered by the printer (*option*).

### WASHER-DISINFECTOR SINGLE DROP DOWN DOOR

Push the key **START**.

Open the door, the display recovers its initial state.

### WASHER-DISINFECTOR DOUBLE DROP DOWN DOOR

O P E N I N G   W A I T I N G  
D O O R   U N L O A D I N G

Open the unloading side door and the following message appears.

C L O S I N G   W A I T I N G  
D O O R   U N L O A D I N G

Once the unloading has ended, close the unloading side door.  
The display shows :


<p style="text-align: center;">O P E N I N G   W A I T I N G D O O R   L O A D I N G</p>
--

Open the loading side door and the display recovers its initial state.

## 2.2 REPRINTING OF THE TICKET (OPTION)


It is possible to print the ticket again in the following cases :

- lack of paper (end of roller)
- bad impression.

Press the key .

Wait for the complete impression of the ticket before launching a new washing cycle.

## 2.3 SWITCHING OFF

Push the key .

Close the taps of arrival of water.

Clean the filters of the bottom of the chamber (*see page 56*).


Comment :


In case of an interruption of the electrical feeding, the program is returned to the initial point. It is convenient then to proceed again to the operations of BEGINNING OF A CYCLE. It is convenient to execute again the complete washing cycle.







### 3. INFORMATIONS OUT OF CYCLE

#### 3.1 STAND BY INFORMATIONS







Stand by machine, it is possible .

An action on the key  gives the name of the program.


Besides, a simultaneous action on the program.

-  and  will give the OPTION OF THE PROGRAM by its NAME
-  and  will give the TIME MACHINE and the NUMBERS OF CYCLES already done

Example :

KEYS	DISPLAY
	Duration = 30 mn
	Cycle name
 and 	PROGRAM N° 02 / INSTRUMENTS
 and 	TOTAL = 4 H / CYCLES = 5

### 3.2 READING OF THE NAMES OF THE PROGRAMS

Switch the washer-disinfector ON by pushing the key   
The display shows the number of the last executed program.



**P R O G R A M M E    N ° 0 1**  
**L A N C E R    U P    R A N G E**

Select the wanted program (example : program N°2)


**P R O G R A M M E    N ° 0 2**  
**L A N C E R    U P    R A N G E**

The name of the program appears by an action on the key .


**P R O G R A M M E    N ° 0 2**  
**I N S T R U M E N T S**

A simultaneous action on the keys  and  enables to watch the names of the following programs.


**P R O G R A M M E    N ° 0 3**  
**T E S T    T U B E S**

When you stop pushing on the key , the last marked program is selected.

### 3.3 READING CYCLE NAMES

Switch the washer-disinfector ON by pushing the key   
The display shows the number of the last executed program.  
Select program 00.

P R O G R A M M E   N ° 0 0  
L A N C E R   U P   R A N G E


Validate with  key.


V A L I D A T I O N

Validate with  key a second time.

P R O G R A M M E   N °  
0 1

Select the cycle.

Validate with  key.

The sequencing of all the functions in the cycle can be displayed by repeatedly pressing on the  key.

At the end of the cycle, the display unit returns to its initial rate.


## 4. MODIFYING THE PROGRAMMING

### 4.1 MODIFYING THE CYCLE


*It enables to read, personalize and create the washing programs.*



NEVER MODIFY THE FACTORY PROGRAMS.  
TO RECORD NEW PROGRAMS USE THE 36 FREE  
PROGRAMS.

Power up the washer-disinfector by pushing key .  
The display shows then the number of the last used program.  
Select the program N°00 with the help of the numerical keyboard.




P R O G R A M M E    n ° 0 0  
L A N C E R        U P    R A N G E

Validate with key .

V A L I D A T I O N

Formulate access code -308-.  
If an erroneous code is typed, an error message is displayed, until correct  
code is displayed.

P R O G R A M M E    N °  
0 1

Select the cycle to be modified with  and  or numeric keypad.  
Validate with the  key.

P E R I O D = 0 2 m 0 0 s  
P R E W A S H 1

Choose the time for prewash 1 (1 to 30 min) .  
(The function is cancelled if a time of « 0 » is set).  
Select the minutes. Validate with the  key.  
Select the seconds. Validate with the  key.

C O L D W A T E R  
P R E W A S H 1

Filling water (cold or hot) is selected with key .  
Validate with the  key.

T E M P . = 7 5 ° C  
P R E W A S H 1

Choose the temperature of prewash 1 (0 to 95° C) .  
Validate with the  key.

D E T E R G E N T 0 0 m 0 0 s  
P R E W A S H 1

Choose the detergent intake time (0 to 360 s) .  
Each time the  and  keys is pressed the time is increased or decreased by a step of 1 second, making approximately 5 ml.  
Select the minutes. Validate with the  key.  
Select the seconds. Validate with the  key.

D E T E R G . 2 0 0 m 0 0 s  
P R E W A S H 1

Only used for washer with additional dosing pump.  
Not used. Must be equal to zero.  
Validate with the "START" key.

**Note :**

Set the PREWASH 2, PREWASH 3 and WASH functions in the same way.

0 1 N U M B E R = 1  
R U N N I N G W A T E R 1

Select the number of running water rinses 1 (0 to 9).  
Validate with the  key.

P E R I O D = 0 2 m 0 0 s  
A C I D R I N S E

Select the duration of rinsing with neutralizing acid (1 to 30 min).  
Select the minutes. Validate with the  key.  
Select the seconds. Validate with the  key.

A C I D = 0 0 m 2 1 s  
A C I D R I N S E

Select the duration of acid intake (1 to 30 min).  
Select the minutes. Validate with the  key.  
Select the seconds. Validate with the  key.

0 1 N U M B E R = 1  
R U N N I N G W A T E R 2

Select the number of running water rinses 2 (0 to 9).  
Validate with the  key.

P E R I O D = 0 1 m 0 0 s  
C O L D D E M I . 1

Select the duration of cold demi.(\*) rinse 1 (1 to 30 min).  
Select the minutes. Validate with the  key.  
Select the seconds. Validate with the  key.

**Note :**

Set the COLD DEMI. RINSE 2, COLD DEMI. RINSE 3 and COLD DEMI. RINSE 4 in the same way.

P E R I O D = 0 3 m 1 0 s  
H O T D E M I

Select the duration of the hot demi.(\*) rinse (1 to 30 min) .

Select the minutes. Validate with the  key.

Select the seconds. Validate with the  key.

C O L D W A T E R  
H O T D E M I .

This display only appears if REGENERATION 2 duration (code 988) is different from 0.

Filling demi.\* water rinse (cold or hot) is selected with key .

Validate with the  key.

T E M P . = 8 5 ° C  
H O T D E M I .

Select the temperature of the hot demi. (\*) rinse (0 to 95°C).

Validate with the  key.

(\*) Demi. = demineralized, distilled or osmosis-treated water.

P E R I O D = 2 0 m 0 0 s  
D R Y I N G

Select the drying time (0 to 90 min) .

Set on 0 if your washer is equipped with a "super drying" device.

Select the minutes. Validate with the  key.

Select the seconds. Validate with the  key.

T E M P .     =     9 0 ° C  
D R Y I N G

It only appears if your washer is equipped with a drying regulation device (option), choose drying temperature (0 to 99°C) using numeric keypad or keys **+** et **-**.

Validate with the **START** key.

P E R I O D     =     0 0 m 0 0 s  
S U P E R     D R Y I N G

For the washers with super drying:

Select the super drying time (0 to 90 min) .

Select the minutes. Validate with the **START** key.

Select the seconds. Validate with the **START** key.

T E M P .     =     8 5 ° C  
S U P E R     D R Y I N G

It only appears if your washer is equipped with a drying regulation device (option), choose drying temperature (0 to 99°C) using numeric keypad or keys **+** et **-**.

Validate with the **START** key.


The display unit returns to its initial state.

P R O G R A M M E     n ° 0 1  
L A N C E R     U P     R A N G E




#### 4.2 CYCLE NAME RECORDING PROCEDURE

In addition to being identified by its number (01, 02, 03, etc.), each programmed cycle can be given a "NAME" (examples : CHEMISTRY, BACTERIO, INSTRUMENTS, ANAESTHETIC). A maximum of 16 characters are available. This name can be stored in memory by the operator, using an access code.

Switch on the appliance by pressing switch .

The display unit then indicates the number of the last cycle used.

Select program 00.

Validate with the  key.

V A L I D A T I O N

Enter the access the code -000- on the numeric keypad -7-.


If the code entered is wrong, an error message is displayed.

V A L I D A T I O N  
I N C O R R E C T

Try again. If the right code is entered :



P R O G R A M M E   N A M E  
0 1

Select the program.


Validate with the  key.


P R O G R A M M E   N A M E  
A

The letter A appears at the bottom of the display unit.

Characters are selected with the  and  keys.

Each character must be validated with the  key.

Spaces are obtained with key .

When the name of the cycle has been displayed, complete the line of characters with spaces (using key ).

The display unit returns to its initial state.

## **5. WASHING PROGRAMS**

## 5.1 TABLE OF FACTORY-PROGRAMMED CYCLES 910 UP

Water consumption estimated per operation (according to the baskets used): 14 litres.

Output from acid and detergent pumps (according to the products used): 280 ml/min.

FUNCTIONS	POSSIBILITY	Volumetric flasks	Bacteriology Virology	Chemistry Biology	Agarose Gel
		CYCLE 01	CYCLE 02	CYCLE 03	CYCLE 04
PREWASH TIME	0 TO 30 mn	1	2	2	2
FILLING	HOT/COLD	H	H	H	H
PREWASH 1 TEMPERATURE	0 TO 95 °C	0	0	0	90
PREWASH 1 DETERGENT	0 TO 360 s	6	6	6	24
Option : PREWASH 1 DETERGENT 2	0 TO 360 s	0	0	0	0
PREWASH 2 TIME	0 TO 30 mn	0	0	0	1
FILLING	HOT/COLD	/	/	/	H
PREWASH 2 TEMPERATURE	0 TO 95 °C	/	/	/	0
PREWASH 2 DETERGENT	0 TO 360 s	/	/	/	0
Option : PREWASH 2 DETERGENT 2	0 TO 360 s	/	/	/	0
PREWASH 3 TIME	0 TO 30 mn	0	0	0	0
FILLING	HOT/COLD	/	/	/	/
PREWASH 3 TEMPERATURE	0 TO 95 °C	/	/	/	/
PREWASH 3 DETERGENT	0 TO 360 s	/	/	/	/
Option : PREWASH 3 DETERGENT 2	0 TO 360 s	/	/	/	/
WASH TIME	0 TO 30 mn	4	4	2	2
FILLING	HOT/COLD	H	H	H	H
WASH TEMPERATURE	0 TO 95 °C	50	85	70	90
WASH DETERGENT	0 TO 360 s	24	24	24	30
Option : WASH DETERGENT 2	0 TO 360 s	0	0	0	0
RUNNING WATER RINSE 1	0 TO 9	1	1	2	2
ACID RINSE TIME	0 TO 30 mn	2	2	2	2
NEUTRALISING ACID	0 TO 360 s	24	24	24	24
RUNNING WATER RINSE 2	0 TO 9	1	2	1	1
COLD DEMI. TIME 1	0 TO 30 mn	1	0	1	1
COLD DEMI. TIME 2	0 TO 30 mn	0	0	1	0
COLD DEMI. TIME 3	0 TO 30 mn	0	0	0	0
COLD DEMI. TIME 4	0 TO 30 mn	0	0	0	0
HOT DEMI. TIME	0 TO 30 mn	1	1	1	1
HOT DEMI. TEMPERATURE	0 TO 95 °C	50	80	80	80
HOT DEMI. LUBRICANT	0 TO 360 s	0	0	0	0
DRYING	0 TO 30 mn	10	25	25	25
DRYING TEMPERATURE *	0 TO 95 °C	60	60	60	90

\*

IF DRYING TEMPERATURE ADJUSTEMENT OPTION

## 5.2 TABLE OF FACTORY-PROGRAMMED CYCLES 910 UPSS

Water consumption estimated per operation (according to the baskets used): 17 litres.

Output from acid and detergent pumps (according to the products used): 280 ml/min.

FUNCTIONS	POSSIBILITY	Volumetric flasks	Bacteriology Virology	Chemistry Biology	Agarose Gel
		CYCLE 01	CYCLE 02	CYCLE 03	CYCLE 04
PREWASH TIME	0 TO 30 mn	1	2	2	2
FILLING	HOT/COLD	H	H	H	H
PREWASH 1 TEMPERATURE	0 TO 95 °C	0	0	0	90
PREWASH 1 DETERGENT	0 TO 360 s	7	7	7	29
Option : PREWASH 1 DETERGENT 2	0 TO 360 s	0	0	0	0
PREWASH 2 TIME	0 TO 30 mn	0	0	0	1
FILLING	HOT/COLD	/	/	/	H
PREWASH 2 TEMPERATURE	0 TO 95 °C	/	/	/	0
PREWASH 2 DETERGENT	0 TO 360 s	/	/	/	0
Option : PREWASH 2 DETERGENT 2	0 TO 360 s	/	/	/	0
PREWASH 3 TIME	0 TO 30 mn	0	0	0	0
FILLING	HOT/COLD	/	/	/	/
PREWASH 3 TEMPERATURE	0 TO 95 °C	/	/	/	/
PREWASH 3 DETERGENT	0 TO 360 s	/	/	/	/
Option : PREWASH 3 DETERGENT 2	0 TO 360 s	/	/	/	/
WASH TIME	0 TO 30 mn	4	4	2	2
FILLING	HOT/COLD	H	H	H	H
WASH TEMPERATURE	0 TO 95 °C	50	85	70	90
WASH DETERGENT	0 TO 360 s	29	29	29	36
Option : WASH DETERGENT 2	0 TO 360 s	0	0	0	0
RUNNING WATER RINSE 1	0 TO 9	1	1	2	2
ACID RINSE TIME	0 TO 30 mn	2	2	2	2
NEUTRALISING ACID	0 TO 360 s	29	29	29	29
RUNNING WATER RINSE 2	0 TO 9	1	2	1	1
COLD DEMI. TIME 1	0 TO 30 mn	1	0	1	1
COLD DEMI. TIME 2	0 TO 30 mn	0	0	1	0
COLD DEMI. TIME 3	0 TO 30 mn	0	0	0	0
COLD DEMI. TIME 4	0 TO 30 mn	0	0	0	0
HOT DEMI. TIME	0 TO 30 mn	1	1	1	1
HOT DEMI. TEMPERATURE	0 TO 95 °C	50	80	80	80
HOT DEMI. LUBRICANT	0 TO 360 s	0	0	0	0
DRYING	0 TO 30 mn	0	0	0	0
SUPER DRYING	0 TO 30 mn	10	15	15	15
DRYING TEMPERATURE *	0 TO 95 °C	60	60	60	90

\*

IF DRYING TEMPERATURE ADJUSTEMENT OPTION

## 5.3 TABLE OF FACTORY-PROGRAMMED CYCLES 1300 UP

Water consumption estimated per operation (according to the baskets used): 17 litres.

Output from acid and detergent pumps (according to the products used): 280 ml/min.

FUNCTIONS	POSSIBILITY	Volumetric flasks	Bacteriology Virology	Chemistry Biology	Agarose Gel
		CYCLE 01	CYCLE 02	CYCLE 03	CYCLE 04
PREWASH TIME	0 TO 30 mn	1	2	2	2
FILLING	HOT/COLD	H	H	H	H
PREWASH 1 TEMPERATURE	0 TO 95 °C	0	0	0	90
PREWASH 1 DETERGENT	0 TO 360 s	7	7	7	29
Option : PREWASH 1 DETERGENT 2	0 TO 360 s	0	0	0	0
PREWASH 2 TIME	0 TO 30 mn	0	0	0	1
FILLING	HOT/COLD	/	/	/	H
PREWASH 2 TEMPERATURE	0 TO 95 °C	/	/	/	0
PREWASH 2 DETERGENT	0 TO 360 s	/	/	/	0
Option : PREWASH 2 DETERGENT 2	0 TO 360 s	/	/	/	0
PREWASH 3 TIME	0 TO 30 mn	0	0	0	0
FILLING	HOT/COLD	/	/	/	/
PREWASH 3 TEMPERATURE	0 TO 95 °C	/	/	/	/
PREWASH 3 DETERGENT	0 TO 360 s	/	/	/	/
Option : PREWASH 3 DETERGENT 2	0 TO 360 s	/	/	/	/
WASH TIME	0 TO 30 mn	4	4	2	2
FILLING	HOT/COLD	H	H	H	H
WASH TEMPERATURE	0 TO 95 °C	50	85	70	90
WASH DETERGENT	0 TO 360 s	29	29	29	36
Option : WASH DETERGENT 2	0 TO 360 s	0	0	0	0
RUNNING WATER RINSE 1	0 TO 9	1	1	2	2
ACID RINSE TIME	0 TO 30 mn	2	2	2	2
NEUTRALISING ACID	0 TO 360 s	29	29	29	29
RUNNING WATER RINSE 2	0 TO 9	1	2	1	1
COLD DEMI. TIME 1	0 TO 30 mn	1	0	1	1
COLD DEMI. TIME 2	0 TO 30 mn	0	0	1	0
COLD DEMI. TIME 3	0 TO 30 mn	0	0	0	0
COLD DEMI. TIME 4	0 TO 30 mn	0	0	0	0
HOT DEMI. TIME	0 TO 30 mn	1	1	1	1
HOT DEMI. TEMPERATURE	0 TO 95 °C	50	80	80	80
HOT DEMI. LUBRICANT	0 TO 360 s	0	0	0	0
DRYING	0 TO 30 mn	10	25	25	25
DRYING TEMPERATURE *	0 TO 95 °C	60	60	60	90

\*

IF DRYING TEMPERATURE ADJUSTEMENT OPTION

## 5.4 TABLE OF FACTORY-PROGRAMMED CYCLES 1300 UPSS

Water consumption estimated per operation (according to the baskets used): 17 litres.

Output from acid and detergent pumps (according to the products used): 280 ml/min.

FUNCTIONS	POSSIBILITY	Volumetric flasks	Bacteriology Virology	Chemistry Biology	Agarose Gel
		CYCLE 01	CYCLE 02	CYCLE 03	CYCLE 04
PREWASH TIME	0 TO 30 mn	1	2	2	2
FILLING	HOT/COLD	H	H	H	H
PREWASH 1 TEMPERATURE	0 TO 95 °C	0	0	0	90
PREWASH 1 DETERGENT	0 TO 360 s	7	7	7	29
Option : PREWASH 1 DETERGENT 2	0 TO 360 s	0	0	0	0
PREWASH 2 TIME	0 TO 30 mn	0	0	0	1
FILLING	HOT/COLD	/	/	/	H
PREWASH 2 TEMPERATURE	0 TO 95 °C	/	/	/	0
PREWASH 2 DETERGENT	0 TO 360 s	/	/	/	0
Option : PREWASH 2 DETERGENT 2	0 TO 360 s	/	/	/	0
PREWASH 3 TIME	0 TO 30 mn	0	0	0	0
FILLING	HOT/COLD	/	/	/	/
PREWASH 3 TEMPERATURE	0 TO 95 °C	/	/	/	/
PREWASH 3 DETERGENT	0 TO 360 s	/	/	/	/
Option : PREWASH 3 DETERGENT 2	0 TO 360 s	/	/	/	/
WASH TIME	0 TO 30 mn	4	4	2	2
FILLING	HOT/COLD	H	H	H	H
WASH TEMPERATURE	0 TO 95 °C	50	85	70	90
WASH DETERGENT	0 TO 360 s	29	29	29	36
Option : WASH DETERGENT 2	0 TO 360 s	0	0	0	0
RUNNING WATER RINSE 1	0 TO 9	1	1	2	2
ACID RINSE TIME	0 TO 30 mn	2	2	2	2
NEUTRALISING ACID	0 TO 360 s	29	29	29	29
RUNNING WATER RINSE 2	0 TO 9	1	2	1	1
COLD DEMI. TIME 1	0 TO 30 mn	1	0	1	1
COLD DEMI. TIME 2	0 TO 30 mn	0	0	1	0
COLD DEMI. TIME 3	0 TO 30 mn	0	0	0	0
COLD DEMI. TIME 4	0 TO 30 mn	0	0	0	0
HOT DEMI. TIME	0 TO 30 mn	1	1	1	1
HOT DEMI. TEMPERATURE	0 TO 95 °C	50	80	80	80
HOT DEMI. LUBRICANT	0 TO 360 s	0	0	0	0
DRYING	0 TO 30 mn	0	0	0	0
SUPER DRYING	0 TO 30 mn	10	15	15	15
DRYING TEMPERATURE *	0 TO 95 °C	60	60	60	90

\*

IF DRYING TEMPERATURE ADJUSTEMENT OPTION

## 5.5 TABLE OF FACTORY-PROGRAMMED CYCLES 1400 UP

Water consumption estimated per operation (according to the baskets used): 25 litres.

Output from acid and detergent pumps (according to the products used): 280 ml/min.

FUNCTIONS	POSSIBILITY	Volumetric flasks	Bacteriology Virology	Chemistry Biology	Agarose Gel
		CYCLE 01	CYCLE 02	CYCLE 03	CYCLE 04
PREWASH TIME	0 TO 30 mn	1	2	2	2
FILLING	HOT/COLD	H	H	H	H
PREWASH 1 TEMPERATURE	0 TO 95 °C	0	0	0	90
PREWASH 1 DETERGENT	0 TO 360 s	11	11	11	43
Option : PREWASH 1 DETERGENT 2	0 TO 360 s	0	0	0	0
PREWASH 2 TIME	0 TO 30 mn	0	0	0	1
FILLING	HOT/COLD	/	/	/	H
PREWASH 2 TEMPERATURE	0 TO 95 °C	/	/	/	0
PREWASH 2 DETERGENT	0 TO 360 s	/	/	/	0
Option : PREWASH 2 DETERGENT 2	0 TO 360 s	/	/	/	0
PREWASH 3 TIME	0 TO 30 mn	0	0	0	0
FILLING	HOT/COLD	/	/	/	/
PREWASH 3 TEMPERATURE	0 TO 95 °C	/	/	/	/
PREWASH 3 DETERGENT	0 TO 360 s	/	/	/	/
Option : PREWASH 3 DETERGENT 2	0 TO 360 s	/	/	/	/
WASH TIME	0 TO 30 mn	4	4	2	2
FILLING	HOT/COLD	H	H	H	H
WASH TEMPERATURE	0 TO 95 °C	50	85	70	90
WASH DETERGENT	0 TO 360 s	43	43	43	54
Option : WASH DETERGENT 2	0 TO 360 s	0	0	0	0
RUNNING WATER RINSE 1	0 TO 9	1	1	2	2
ACID RINSE TIME	0 TO 30 mn	2	2	2	2
NEUTRALISING ACID	0 TO 360 s	43	43	43	43
RUNNING WATER RINSE 2	0 TO 9	1	2	1	1
COLD DEMI. TIME 1	0 TO 30 mn	1	0	1	1
COLD DEMI. TIME 2	0 TO 30 mn	0	0	1	0
COLD DEMI. TIME 3	0 TO 30 mn	0	0	0	0
COLD DEMI. TIME 4	0 TO 30 mn	0	0	0	0
HOT DEMI. TIME	0 TO 30 mn	1	1	1	1
HOT DEMI. TEMPERATURE	0 TO 95 °C	50	80	80	80
HOT DEMI. LUBRICANT	0 TO 360 s	0	0	0	0
DRYING	0 TO 30 mn	10	25	25	25
DRYING TEMPERATURE *	0 TO 95 °C	60	60	60	90

\*

IF DRYING TEMPERATURE ADJUSTEMENT OPTION

## 5.6 TABLE OF FACTORY-PROGRAMMED CYCLES 1400 UPSS

Water consumption estimated per operation (according to the baskets used): 25 litres.

Output from acid and detergent pumps (according to the products used): 280 ml/min.

FUNCTIONS	POSSIBILITY	Volumetric flasks	Bacteriology Virology	Chemistry Biology	Agarose Gel
		CYCLE 01	CYCLE 02	CYCLE 03	CYCLE 04
PREWASH TIME	0 TO 30 mn	1	2	2	2
FILLING	HOT/COLD	H	H	H	H
PREWASH 1 TEMPERATURE	0 TO 95 °C	0	0	0	90
PREWASH 1 DETERGENT	0 TO 360 s	11	11	11	43
Option : PREWASH 1 DETERGENT 2	0 TO 360 s	0	0	0	0
PREWASH 2 TIME	0 TO 30 mn	0	0	0	1
FILLING	HOT/COLD	/	/	/	H
PREWASH 2 TEMPERATURE	0 TO 95 °C	/	/	/	0
PREWASH 2 DETERGENT	0 TO 360 s	/	/	/	0
Option : PREWASH 2 DETERGENT 2	0 TO 360 s	/	/	/	0
PREWASH 3 TIME	0 TO 30 mn	0	0	0	0
FILLING	HOT/COLD	/	/	/	/
PREWASH 3 TEMPERATURE	0 TO 95 °C	/	/	/	/
PREWASH 3 DETERGENT	0 TO 360 s	/	/	/	/
Option : PREWASH 3 DETERGENT 2	0 TO 360 s	/	/	/	/
WASH TIME	0 TO 30 mn	4	4	2	2
FILLING	HOT/COLD	H	H	H	H
WASH TEMPERATURE	0 TO 95 °C	50	85	70	90
WASH DETERGENT	0 TO 360 s	43	43	43	54
Option : WASH DETERGENT 2	0 TO 360 s	0	0	0	0
RUNNING WATER RINSE 1	0 TO 9	1	1	2	2
ACID RINSE TIME	0 TO 30 mn	2	2	2	2
NEUTRALISING ACID	0 TO 360 s	43	43	43	43
RUNNING WATER RINSE 2	0 TO 9	1	2	1	1
COLD DEMI. TIME 1	0 TO 30 mn	1	0	1	1
COLD DEMI. TIME 2	0 TO 30 mn	0	0	1	0
COLD DEMI. TIME 3	0 TO 30 mn	0	0	0	0
COLD DEMI. TIME 4	0 TO 30 mn	0	0	0	0
HOT DEMI. TIME	0 TO 30 mn	1	1	1	1
HOT DEMI. TEMPERATURE	0 TO 95 °C	50	80	80	80
HOT DEMI. LUBRICANT	0 TO 360 s	0	0	0	0
DRYING	0 TO 30 mn	0	0	0	0
SUPER DRYING	0 TO 30 mn	10	15	15	15
DRYING TEMPERATURE *	0 TO 95 °C	60	60	60	90

\* IF DRYING TEMPERATURE ADJUSTEMENT OPTION



## 5.7 TABLE OF FACTORY-PROGRAMMED CYCLES 1600 UP

Water consumption estimated per operation (according to the baskets used): 25 litres.

Output from acid and detergent pumps (according to the products used): 280 ml/min.

FUNCTIONS	POSSIBILITY	Volumetric flasks	Bacteriology Virology	Chemistry Biology	Agarose Gel
		CYCLE 01	CYCLE 02	CYCLE 03	CYCLE 04
PREWASH TIME	0 TO 30 mn	1	2	2	2
FILLING	HOT/COLD	H	H	H	H
PREWASH 1 TEMPERATURE	0 TO 95 °C	0	0	0	90
PREWASH 1 DETERGENT	0 TO 360 s	13	13	13	51
Option : PREWASH 1 DETERGENT 2	0 TO 360 s	0	0	0	0
PREWASH 2 TIME	0 TO 30 mn	0	0	0	1
FILLING	HOT/COLD	/	/	/	H
PREWASH 2 TEMPERATURE	0 TO 95 °C	/	/	/	0
PREWASH 2 DETERGENT	0 TO 360 s	/	/	/	0
Option : PREWASH 2 DETERGENT 2	0 TO 360 s	/	/	/	0
PREWASH 3 TIME	0 TO 30 mn	0	0	0	0
FILLING	HOT/COLD	/	/	/	/
PREWASH 3 TEMPERATURE	0 TO 95 °C	/	/	/	/
PREWASH 3 DETERGENT	0 TO 360 s	/	/	/	/
Option : PREWASH 3 DETERGENT 2	0 TO 360 s	/	/	/	/
WASH TIME	0 TO 30 mn	4	4	2	2
FILLING	HOT/COLD	H	H	H	H
WASH TEMPERATURE	0 TO 95 °C	50	85	70	90
WASH DETERGENT	0 TO 360 s	51	51	51	1mn04
Option : WASH DETERGENT 2	0 TO 360 s	0	0	0	0
RUNNING WATER RINSE 1	0 TO 9	1	1	2	2
ACID RINSE TIME	0 TO 30 mn	2	2	2	2
NEUTRALISING ACID	0 TO 360 s	51	51	51	51
RUNNING WATER RINSE 2	0 TO 9	1	2	1	1
COLD DEMI. TIME 1	0 TO 30 mn	1	0	1	1
COLD DEMI. TIME 2	0 TO 30 mn	0	0	1	0
COLD DEMI. TIME 3	0 TO 30 mn	0	0	0	0
COLD DEMI. TIME 4	0 TO 30 mn	0	0	0	0
HOT DEMI. TIME	0 TO 30 mn	1	1	1	1
HOT DEMI. TEMPERATURE	0 TO 95 °C	50	80	80	80
HOT DEMI. LUBRICANT	0 TO 360 s	0	0	0	0
DRYING	0 TO 30 mn	10	25	25	25
DRYING TEMPERATURE *	0 TO 95 °C	60	60	60	90

\*

IF DRYING TEMPERATURE ADJUSTEMENT OPTION

## 5.8 TABLE OF FACTORY-PROGRAMMED CYCLES 1600 UPSS

Water consumption estimated per operation (according to the baskets used): 30 litres.

Output from acid and detergent pumps (according to the products used): 280 ml/min.

FUNCTIONS	POSSIBILITY	Volumetric flasks	Bacteriology Virology	Chemistry Biology	Agarose Gel
		CYCLE 01	CYCLE 02	CYCLE 03	CYCLE 04
PREWASH TIME	0 TO 30 mn	1	2	2	2
FILLING	HOT/COLD	H	H	H	H
PREWASH 1 TEMPERATURE	0 TO 95 °C	0	0	0	90
PREWASH 1 DETERGENT	0 TO 360 s	13	13	13	51
Option : PREWASH 1 DETERGENT 2	0 TO 360 s	0	0	0	0
PREWASH 2 TIME	0 TO 30 mn	0	0	0	1
FILLING	HOT/COLD	/	/	/	H
PREWASH 2 TEMPERATURE	0 TO 95 °C	/	/	/	0
PREWASH 2 DETERGENT	0 TO 360 s	/	/	/	0
Option : PREWASH 2 DETERGENT 2	0 TO 360 s	/	/	/	0
PREWASH 3 TIME	0 TO 30 mn	0	0	0	0
FILLING	HOT/COLD	/	/	/	/
PREWASH 3 TEMPERATURE	0 TO 95 °C	/	/	/	/
PREWASH 3 DETERGENT	0 TO 360 s	/	/	/	/
Option : PREWASH 3 DETERGENT 2	0 TO 360 s	/	/	/	/
WASH TIME	0 TO 30 mn	4	4	2	2
FILLING	HOT/COLD	H	H	H	H
WASH TEMPERATURE	0 TO 95 °C	50	85	70	90
WASH DETERGENT	0 TO 360 s	51	51	51	1mn04
Option : WASH DETERGENT 2	0 TO 360 s	0	0	0	0
RUNNING WATER RINSE 1	0 TO 9	1	1	2	2
ACID RINSE TIME	0 TO 30 mn	2	2	2	2
NEUTRALISING ACID	0 TO 360 s	51	51	51	51
RUNNING WATER RINSE 2	0 TO 9	1	2	1	1
COLD DEMI. TIME 1	0 TO 30 mn	1	0	1	1
COLD DEMI. TIME 2	0 TO 30 mn	0	0	1	0
COLD DEMI. TIME 3	0 TO 30 mn	0	0	0	0
COLD DEMI. TIME 4	0 TO 30 mn	0	0	0	0
HOT DEMI. TIME	0 TO 30 mn	1	1	1	1
HOT DEMI. TEMPERATURE	0 TO 95 °C	50	80	80	80
HOT DEMI. LUBRICANT	0 TO 360 s	0	0	0	0
DRYING	0 TO 30 mn	0	0	0	0
SUPER DRYING	0 TO 30 mn	10	15	15	15
DRYING TEMPERATURE *	0 TO 95 °C	60	60	60	90

\* IF DRYING TEMPERATURE ADJUSTEMENT OPTION

## 5.9 USER CYCLE PROGRAMMING TABLE

		CYCLE	CYCLE	CYCLE	CYCLE
FUNCTIONS	POSSIBILITY				
PREWASH TIME	0 TO 30 mn				
FILLING	HOT/COLD				
PREWASH 1 TEMPERATURE	0 TO 95 °C				
PREWASH 1 DETERGENT	0 TO 360 s				
Option : PREWASH 1 DETERGENT 2	0 TO 360 s				
PREWASH 2 TIME	0 TO 30 mn				
FILLING	HOT/COLD				
PREWASH 2 TEMPERATURE	0 TO 95 °C				
PREWASH 2 DETERGENT	0 TO 360 s				
Option : PREWASH 2 DETERGENT 2	0 TO 360 s				
PREWASH 3 TIME	0 TO 30 mn				
FILLING	HOT/COLD				
PREWASH 3 TEMPERATURE	0 TO 95 °C				
PREWASH 3 DETERGENT	0 TO 360 s				
Option : PREWASH 3 DETERGENT 2	0 TO 360 s				
WASH TIME	0 TO 30 mn				
FILLING	HOT/COLD				
WASH TEMPERATURE	0 TO 95 °C				
WASH DETERGENT	0 TO 360 s				
Option : WASH DETERGENT 2	0 TO 360 s				
RUNNING WATER RINSE 1	0 TO 9				
ACID RINSE TIME	0 TO 30 mn				
NEUTRALISING ACID	0 TO 360 s				
RUNNING WATER RINSE 2	0 TO 9				
COLD DEMI. TIME 1	0 TO 30 mn				
COLD DEMI. TIME 2	0 TO 30 mn				
COLD DEMI. TIME 3	0 TO 30 mn				
COLD DEMI. TIME 4	0 TO 30 mn				
HOT DEMI. TIME	0 TO 30 mn				
HOT DEMI. TEMPERATURE	0 TO 95 °C				
HOT DEMI. LUBRICANT	0 TO 360 s				
DRYING	0 TO 30 mn				
SUPER DRYING	0 TO 30 mn				
DRYING TEMPERATURE *	0 TO 95 °C				

\*

IF DRYING TEMPERATURE ADJUSTEMENT OPTION

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## CHAPTER 4 TRACEABILITY

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These last years, TRACEABILITY has become in the hospital milieu in a crucial issue. The matter is to control permanently the correct development of the washing cycle and to obtain its validation.

TRACEABILITY enables the supervision of the correct performance of parameters such as washing, chamber filling, detergent taking, effective temperature, duration of the phases.

During the development of the program all the data must be registered, archived in paper support and, optionally, on data support.

You will find in this chapter the different systems of traceability proposed by our company.

## **1. PRINTER AND OUTPUT RS 232 (OPTION)**

### **ITS ROLE :**

The **LANCER PRINTER** checks permanently the right development of the washing cycle.

The printer permit the stock of the informations.

### **ITS RESULTS :**

At the end of the program, the results are registered and archived, whether on a paper support by the mean of an horodated ticket, or a magnetic support via RS232 connection (provided).

**EXAMPLE OF TICKET**

**LANCER**  
-----

Signature :

Date:

Cycle period :  
End :

INCIDENT OCCURED :

Time :  
SUPER DRYING :

Time :  
HOT DEMI. :  
Emptying :  
Recycling :  
°C= 1:            2:            3:  
°C= 1:            2:            3:  
Additive intake :  
Recycling (°C) :  
Heating time :  
°C Programmed :  
Filling :  
Time :  
COLD DEMI.:  
Emptying :  
Recycling :  
Filling :  
Time :  
RUNNING WATER 2 :  
Emptying :  
Recycling :  
Filling :  
Time :  
ACID RINSE :  
Emptying :  
Recycling :  
Filling :  
Acid intake :

→

↓

Time :  
RUNNING WATER 1 :  
Emptying :  
Recycling :  
Filling :

Time :  
REGENERATION :

Time :  
WASH :  
Emptying :  
°C= 1:            2:            3:  
°C= 1:            2:            3:  
Recycling (°C) :  
Heating time :  
°C Programmed :  
Filling :  
Detergent intake :

Time :  
PRE WASH 1 :  
Emptying :  
Recycling :  
°C= 1:            2:            3:  
°C= 1:            2:            3:  
Recycling (°C) :  
Heating time :  
°C Programmed :  
Filling :  
Detergent intake :

Time :  
RESINS RINSE :

Beginning :  
Date :

Hours :                      Cycles :

Programme N°  
COMPLETE VERSION  
FUNCTIONS ANALYSIS

## 2. VALIDATION MONITOR, PRINTER AND OUTPUT (OPTION)

The UP Range washers-disinfectors are controlled by a programmable microprocessor. In order to obtain an independent verification of the washing-disinfecting process, a **VALIDATION MONITOR** is provided. The **VALIDATION MONITOR** is a microprocessor independent from the controller and equipped with its own sensors and clock.

### **ITS ROLE :**

The **LANCER VALIDATION MONITOR** is a system of validation of the washing parameters. It checks permanently the right development of the washing cycle and allows its validation, as well as the stock of the information.

### **ITS RESULTS :**

At the end of the program, the results are registered and archived, whether on a paper support by the mean of an horodated ticket, or on a magnetic support via a RS 232 connection (provided).

### **IMPRESSION OF A REPORT :**

The date, the hour, the number of phases of the program as well as their denomination are printed in the ticket, these durations can vary from one cycle to the other.

The temperature is printed at constant intervals, which can be previously chosen. The value of the temperature is given by the **LANCER VALIDATION MONITOR**, and can be compared to the programmed one, which is printed as well.

At the end of the cycle, the hour of ending of the cycle and its complete duration are indicated at the bottom of the ticket. This ticket is called "complete ticket"; it is generally used during the installation phase of the washer, in order to determine the best washing and disinfecting procedure and to periodically validate the washer.

A smaller ticket, "simplified ticket", is enough for the ordinary washings. It simply indicates the date and the hour of start and end of the cycle, the number of programs and their durations.

If an incident occurs during the washing, a complete ticket will be automatically printed, showing all the phases executed before the failure.



THE SHOWED TEMPERATURE IN THE DISPLAY IS THE TEMPERATURE AT THE BOTTOM OF THE CHAMBER (PRE-SET REGULATED TEMPERATURE). THE TEMPERATURE PRINTED ON THE TICKET CORRESPONDS TO THE REAL TEMPERATURE IN THE CHAMBER.  
A DIFERENTIAL OF TEMPERATURE CAN EXIST.

**EXAMPLE OF TICKET**

**LANCER**  
-----

Signature :

Date:

Cycle period :

End :

INCIDENT OCCURED :

Time :

SUPER DRYING :

Time :

HOT DEMI. :

Emptying :

Recycling :

°C= 1:            2:            3:

°C= 1:            2:            3:

Additive intake :

Recycling (°C) :

Heating time :

°C Programmed :

Filling :

Time :

COLD DEMI.:

Emptying :

Recycling :

Filling :

Time :

RUNNING WATER 2 :

Emptying :

Recycling :

Filling :

Time :

ACID RINSE :

Emptying :

Recycling :

Filling :

Acid intake :

→

↓

Time :

RUNNING WATER 1 :

Emptying :

Recycling :

Filling :

Time :

REGENERATION :

Time :

WASH :

Emptying :

°C= 1:            2:            3:

°C= 1:            2:            3:

Recycling (°C) :

Heating time :

°C Programmed :

Filling :

Detergent intake :

Time :

PRE WASH 1 :

Emptying :

Recycling :

°C= 1:            2:            3:

°C= 1:            2:            3:

Recycling (°C) :

Heating time :

°C Programmed :

Filling :

Detergent intake :

Time :

RESINS RINSE :

Beginning :

Date :

Hours :                      Cycles :

Programme N°  
COMPLETE VERSION  
FUNCTIONS ANALYSIS



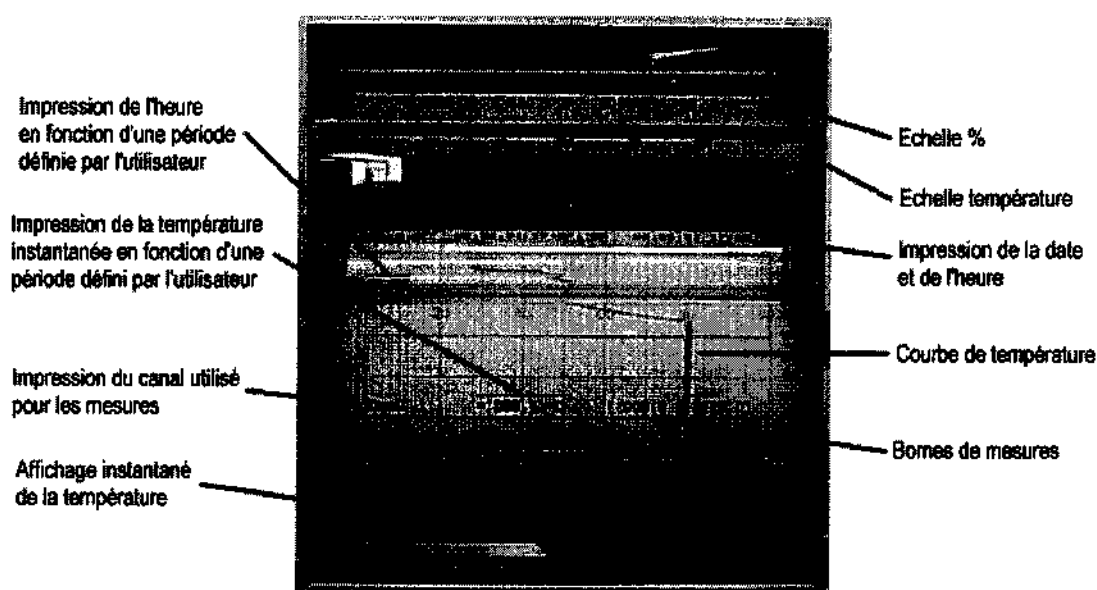
### 3. RECORDER (OPTION)

#### 3.1 USE AND ADJUSTEMENT

Refer to the manual of the apparatus.

#### 3.2 PEN CHART RECORDER

The pen chart recorder enables the register of a curve of temperature on a paper support.



#### 4. VALITRACE (OPTION VTRACE MON or OPTION VTRACE MUL)



V@litrace is a software developed by LANCER to meet current needs on traceability and information communication. V@litrace transfers the information given by the controller of the washer on a separate PC, and creates a database permitting to:

- stock all the information about all the cycles run with the washer.
- print the cycles on a standard PC printer.
- search information about the cycles by using filters (type of cycle, user code, alarms, etc.)
- create links between the washer and centralised technical management systems or traceability systems existing on site (to be studied depending on the system used).

## CHAPTER 5 MAINTENANCE OF THE WASHER



NEVER USE OR PLACE IN THE WASHER REMMANTS OF PRODUCTS SUCHS AS ACETONE, SOLVANTS, OLI, SULFO-CROMIC, PETROL DERIVEDS, ACIDS (SULFURIC, NITRIC, CLORHIDRIC, EVEN AT LOW CONCENTRATIONS), ETC.



DURING THE CLEANING OPERATIONS INSIDE THE CHAMBER, IT IS CONVENIENT TO BE PROVIDED WITH GLOVES AND TO PAY ATTENTION TO THE EVENTUAL EDGE TOOLS (NEEDLES, INSTRUMENTS...) WHICH COULD BE PLACED INSIDE THE FILTERS OF THE BOTTOM OF THE CHAMBER.

### 1. REGENERATING OF SOFTENER

*Only for washers with regeneration.*

This function is automatic (masked time).

When the display unit indicates "SALT RECHARGE", it is essential to fill the salt pot located at the bottom of the chamber, inside the washer. Use special softening, regenerating salt.

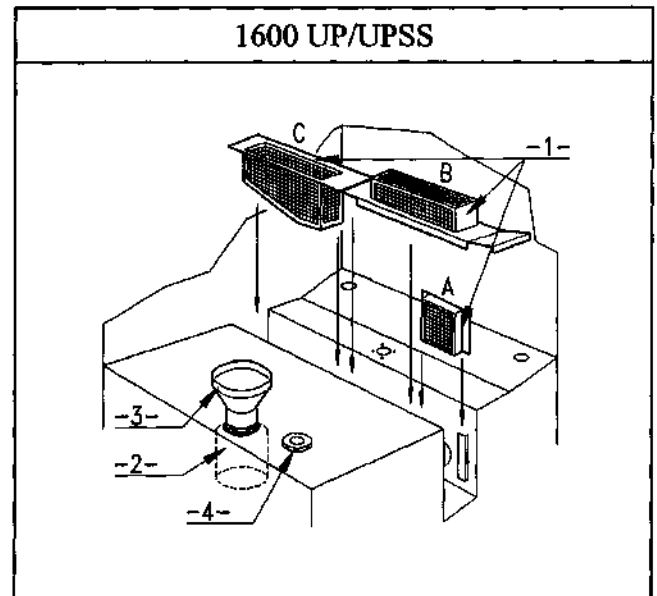
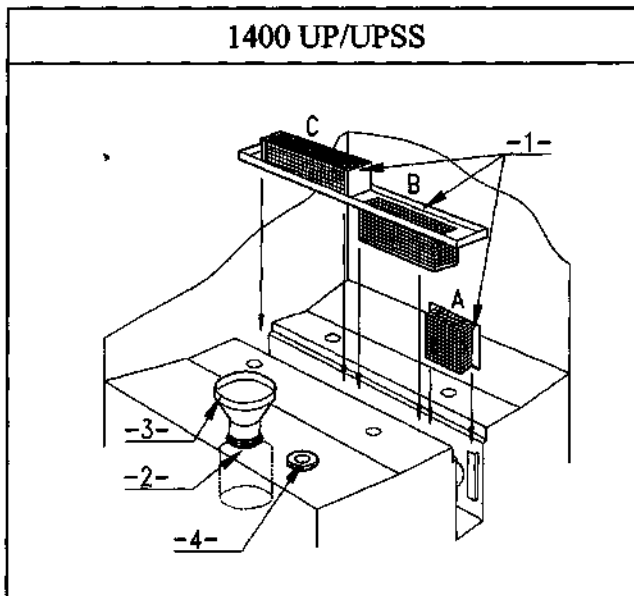
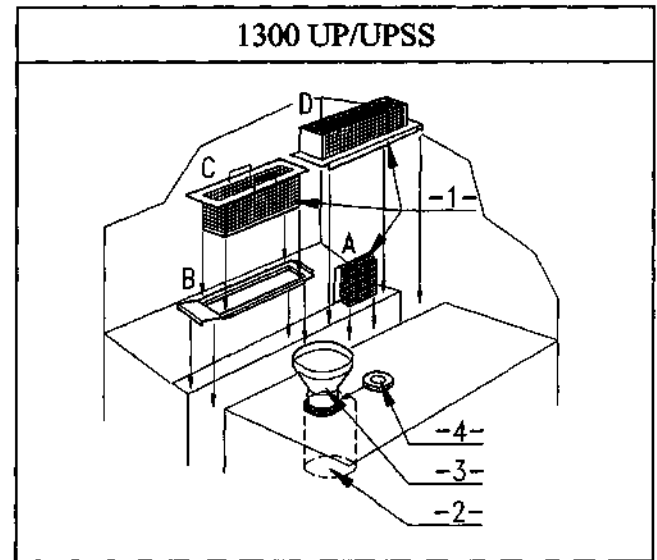
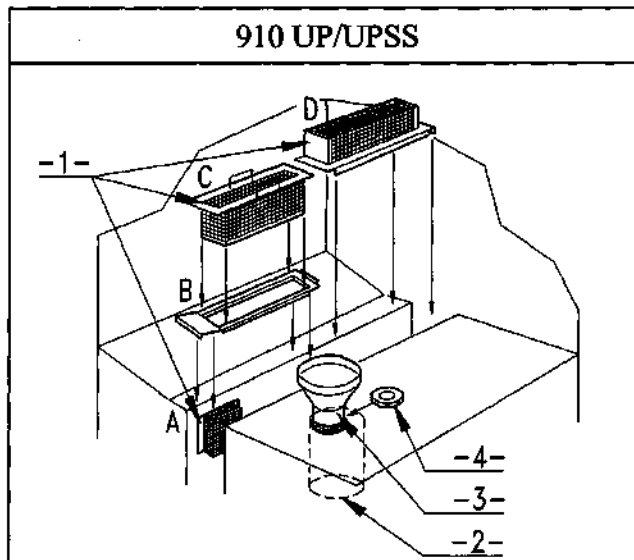


THE LID OF THE POT MUST BE CORRECTLY CLOSED AFTER FILLING

## 2. FITTING THE 3 CHAMBER FILTERS AND SALT POT FILLING

Clean the filters after each cycle

Reinstall them correctly in their housing at the bottom of the chamber



### ORDER OF FITTING:

A -> B -> C -> (D)

1 : FILTERS

2 : SALT POT\*

3 : FILLING FUNNEL\*

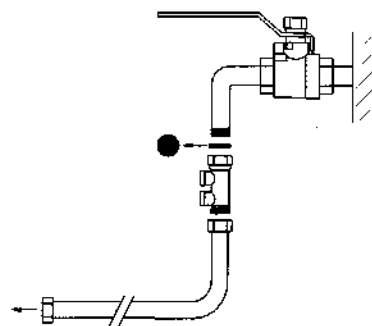
4 : SALT POT CAP\*

\* only for washer with salt pot

### 3. STRAINERS FILTERS

Check the cleanness of the strainer filters and clean them if needed.

The contained remnants in the filters increase the filling times and could activate the alarm "LACK OF WATER".



The filters should be replaced each year.

#### 3.1 DRYING AIR FILTERS

*(Only on washers with air filter.)*

The life duration of the drying air filters depends on the rate of use of the washer-disinfector and the quality of the near air.

We recommend the preventive change of the drying air filters at least one time every year.

Check visually the state of the drying air filters every 6 months

#### 3.2 SHUT DOWN AT END OF DAY

a) SHUT OFF THE WATER INLET COCKS so that the valves are not left pressurised. Do not forget to open them again before using the appliance again.

b) SWITCH OFF THE APPLIANCE.

#### 4. EXTERNAL MAINTENANCE OF THE WASHER-DISINFECTOR

LANCER washers are entirely covered with panels (bodywork) in stainless steel AISI 304L.

##### **Cleaning method :**

The periodic maintenance cleaning must be done with a cleaning product. Should the periodic maintenance have been largely forgotten, we recommend the use of a specific cleaning product.

The product must be applied with the help of a rag or a soft sponge, and always polishing the stainless steel in the sense of the brushing to avoid the risk of stripes. For the drying, the best is using a rubber scraper similar to the one used to the clean windows. This will avoid watering you can have with a rap cleaning.



**PRUDENCE:**  
TRY TO AVOID THE PROJECTIONS OF LIQUID  
OVER THE WASHER-DISINFECTOR.

##### **Cleaning products :**

LANCER offers a maintenance product for stainless steel in the market under the name of LANCERSHINE.

A safe and efficient aerosol cleaning product for a use in the external side of the stainless machines and other equipments to be washed, assuring a very professional finishing. Available in container of 450ml. Ref : LANCERSHINE

##### **Detergents, soaps :**

All the detergents, soaps or cleaning products found in shops can normally be used, but they **MUST NOT** contain chlorinated products. Domestic soaps for dishwashers or washing machines are particularly adapted to the periodical cleaning.

##### **Abrasive dusts :**

These products can stripe the stainless steel surfaces and modify then the aspect, at least locally. Even that, their use can be useful to eliminate by scraping the adherent spots.

### Acid products :

The resource to these acid-cleaning products must only be used in specific cases.

Vinegar (acetic acid) can be used to remove stains left by minerals.

There are phosphoric acid-based or nitric acid-based products specially conceived for the cleaning of stainless steels. It is convenient to follow strictly the instructions given by their manufacturers.

The chloric disinfectants must only be used with caution : diluted solution in cold water, short contact time, abundant rinsing



IN ALL THE CASES IT IS NECESSARY TO PROCEED AFTER THE CLEANING TO AN ABUNDANT AND CAREFUL RINSING (WITH A SOFT TEXTILE), IN ORDER TO ELIMINATE EVERY TRACE OF THE USED PRODUCT.

## **5. PREVENTIVE MAINTENANCE**

LANCER'S TECHNICAL ASSISTANCE SERVICE recommends to all the users at least one annual preventive maintenance visit.

The preventive maintenance reduces the risks of stops of the washer-disinfector due to breakdowns and enables enlarge the life duration of the equipments.

Depending on the countries where the washer-disinfector is used and the local norms, a higher frequency of preventive maintenance visits can be necessary.

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## CHAPTER 6 INCIDENTS

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### 1. INCIDENTS

#### 1.1 THE DETERGENT OR NEUTRALIZING AGENT DOES NOT ENTER THE WASHER

- The tube is blocked.
- The tank is empty.
- The pump hose is pinched.

#### 1.2 THE WASHER DOES NOT FUNCTION

- It is not connected to the power supply.
- There is mains power.
- The circuit-breaker protecting the electrical control circuit has been tripped.  
CONSULT THE TECHNICAL DEPARTMENT.

#### 1.3 ABNORMAL NOISE

- One of the washing arms is touching one or more of the items to be washed.
- Check the loading of the washer.



## 2. LACK OF PRODUCTS

### - LACK OF SALT

*(only for washers with regeneration)*

If there is a lack of salt, the following message is displayed at the start of the cycle when you press the **START** key.

**A L A R M**  
**S A L T       R E C H A R G E**

It is essential to fill the salt pot located inside the washer.

### - LACK OF DETERGENT

*(Only for washers with level floats)*

**A L A R M**  
**D E T E R G E N T   R E C H G .**

It is indispensable to fill the tank.

### - LACK OF NEUTRALIZING ACID

*(Only for washers with level floats)*

**A L A R M**  
**A C I D       R E C H A R G E**

It is indispensable to fill the tank.

### - LACK OF ADDITIVE PRODUCT (DETERGENT 2)

*(Only for washers with level floats and using a additive product)*

**A L A R M**  
**D E T E R G E N T   2**

It is indispensable to fill the tank.


To continue cycle see CHAPTER 2 BEFORE YOU START part CHANGE OF THE TANKS

**Remark :** *(only for washers with key override)*

To continue the cycle after filling the receptacle:

- switch off alarm key button,
- press on **START** button to validate alarm,
- switch on alarm key button


### 3. FAULT ALARMS

These alarms inhibit operation of the washer. To clear the alarm mode, the washer must be switched off by pressing switch .

OR

*(Only for washers with key override)*

To leave alarm mode:

- switch off alarm key button,
- switch off power, throwing ,
- switch on alarm key button

#### FILLING FAULT

**F I L L I N G   F A U L T**  
**P R E W A S H   1**

**INCIDENT** : During the filling phase of PREWASH 1, the washer-disinfector has not reached its level of water before the development of the normal filling time, defined in factory.

**ACTION** : Check the openings of the taps, the state of water arrival tubes and filters.

*This message can also appear during the phases **PREWASH 2, PREWASH 3, WASH, RUNNING WATER RINSE 1, ACID RINSE, RUNNING WATER RINSE 2, COLD DEMI. WATER RINSES 1 to 4 and HOT DEMI. WATER RINSE.***

#### EMPTYING FAULT

**E M P T Y I N G   F A U L T**  
**P R E W A S H   1**

**INCIDENT** : At the end of PREWASH 1, the washer has not been completely emptied by the end of the normal emptying time defined in the factory.

**ACTION** : Check that there is no restriction on the emptying line, that the emptying pump and its pipes are not blocked and that the chamber filters are not clogged.

*This message can also appear during the phases **PREWASH 2, PREWASH 3, WASH, RUNNING WATER RINSE 1, ACID RINSE, RUNNING WATER RINSE 2, COLD DEMI. WATER RINSES 1 to 4 and HOT DEMI. WATER RINSE.***

**PROBE FAULT**

<b>A L A R M</b>	
<b>P R O B E</b>	<b>D E F E C T 1</b>

**INCIDENT** : The probe that checks the water temperature in the chamber is disconnected or defective.

**Probe n°1** temperature probe of chamber

**Probe n°2** temperature probe of chimney drying (only with option drying temperature adjustment)

**Probe n°3** temperature probe of chamber drying (only with option drying temperature adjustment)

**Probe n°4** not used

**ACTION** : Check the electric connection and the state of the probe.

*This message can also appear for the probes 2,3, and 4.*

**HEATING EXCESS**

<b>H E A T I N G   E X C E S S</b>	
<b>P R E W A S H</b>	<b>1</b>

**INCIDENT** : During the heating phase of the prewash 1, this message appears if the temperature increase is 30°C higher than the programmed temperature. To obtain this alarm, programmed temperature has to be preset to 50°C minimum.

**ACTION** : Check the electric connection, the steam valve (steam heating option), the pressure of the steam circuit (steam heating option) and the safety thermal cut-out close to heating elements.

*This message can also appear during the phases **PREWASH 2, PREWASH 3, WASH, DISINFECTION***

**HEATING FAULT**

**H E A T I N G   F A U L T**  
**P R E W A S H        1**

**INCIDENT** : During the heating phase of the prewash 1, this message appears if the temperature increase is not enough rapid.

**ACTION** : Check the electric connection, the steam valve (steam heating option), the pressure of the steam circuit (steam heating option) and the safety thermal cut-out close to heating elements.

*This message can also appear during the phases **PREWASH 2, PREWASH 3, WASH, DISINFECTION.***

**EXTERNAL INTERRUPTION**

*(Only on washers equipped with Validation Monitor - option)*

**E X T .        I N T E R R U P .**  
**P R E W A S H        1**

**INCIDENT** : The Validation Monitor locks the working of the machine - option.

**ACTION** : Wait the complete impression of the ticket.

**Note:**

The following alarm does not lock the development of the cycle.

**- FULL BASIN**

**A L A R M**  
**P R O B E S        D E F E C T**

**INCIDENT** : In the case the chamber contains water at the beginning of the cycle, either following the interruption of the previous cycle or due to an abnormal addition of water from outside.

**ACTION** The washer is emptied and the cycle then proceeds normally.

**VALIDATION MONITOR CONNECTION***(Only for washers equipped with Validation Monitor - option)*

V A L I D A T I O N   M O N I T  
S U P E R V .   C O N N E C T ?

**INCIDENT** : The connection to the Validation Monitor is not correct. Information between main board and Validation Monitor are done through a flat ribbon – serial link. If this connection is not correct when switching the washer ON, an alarm appears.

**ACTION** : Push the key **START** so as the cycle will continue with no further control.

**PRINTER CONNEXION***(Only for washers equipped with printer - option)*

I M P R I M E U R  
C O N N E C T E D ?

**INCIDENT** : The connection to the Printer is not correct. Information between main board and Validation Monitor are done through a flat ribbon – serial link. If this connection is not correct when switching the washer ON, an alarm appears.

**ACTION** : Push the key **START** so as the cycle will continue with no further control.

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## **CHAPTER 7 PRODUCT HEALTH AND SAFETY DATA SHEET**

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You will find in this chapter all the indications concerning the safety data of the LANCER washing products.

- 1 PRODUCT HEALTH AND SAFETY DATA SHEET – DETERGENT « L.L.L. »
- 2 PRODUCT HEALTH AND SAFETY DATA SHEET – NEUTRALIZANT « N.L.L. »
- 3 PRODUCT HEALTH AND SAFETY DATA SHEET – LUBRICANT « V.L.L. »
- 4 PRODUCT HEALTH AND SAFETY DATA SHEET – LANCERSHINE

## 1. SAFETY DATA SHEET - DETERGENT "L.L.L."

### 1 - IDENTIFICATION OF THE PREPARATION

LANCER INDUSTRIE  
30 BD DE L'INDUSTRIE Z.I. DU PAHIN  
F-31170 TOURNEFEUILLE  
Tel. +33 (0)5 61 15 11 11 Fax. +33 (0)5 61 15 16 16  
COMMERCIAL DESIGNATION "L.L.L." DETERGENT  
Poison Centre : Tel. +33 (0)5 61 49 33 33

### 2 - COMPOSITION INFORMATION

Composition : Product contains amongst other ingredients :  
Sodium Hydroxide (C : R34) 4,8% w/w  
Nitrilo Triacetic Acid  
Trisodium Salt

### 3 - HAZARDS INFORMATION

Corrosive. Will cause severe burns to skin, eyes and digestive system.

### 4 - FIRST AID MEASURES

Skin contact : Wash with plenty of water and seek medical advice.  
Eye contact : Wash with plenty of water and seek immediate medical advice.  
Ingestion : Give milk or water to drink and seek immediate medical attention. **DISCOURAGE VOMITING.**  
Inhalation : No measurable levels of inhalation likely.

### 5 - FIRE FIGHTING MEASURES

Flash point : N/A.  
Product not flammable.  
No special procedures necessary  
Unusual Fire Hazards : Contact with hot white metals in a fire may yield Hydrogen which can be the source of explosion in a fire

### 6 - ACCIDENTAL RELEASE MEASURES

Wear protective clothing to avoid contact with skin and eyes.  
For small spillages, flush away with copious amounts of water.  
For larger spillages, soak with sand or other non flammable absorbent and dispose of. Flush area with water.

### 7 - PRECAUTIONS FOR STORAGE, USE AND HANDLING

Protect from extremes of temperature  
Avoid contact with skin and eyes  
USE BEFORE END OF 5 years after its production date.

### 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

SKIN PROTECTION : PVC or rubber gloves must be worn.  
EYE PROTECTION : Goggles or face protector must be worn  
RESPIRATORY PROTECTION : Not required

### 9 - PHYSICAL & CHEMICAL PROPERTIES

Appearance :	Pale straw coloured, non-foaming liquid.
Odour :	Ammonia
S.G. at 20°C :	1.14 - 1.16
pH :	14
Solubility in water :	Miscible
Biodegradable	

**PRODUCT NAME : SODIUM HYDROXIDE 4.8% w/w**

<b>10 - STABILITY &amp; REACTIVITY</b>		
Stable under normal conditions of use and storage. Avoid contact with Aluminium & Zinc metal components. Not suitable for use on non-ferrous metals.		
<b>11 - TOXICOLOGICAL INFORMATION</b>		
Liquid and mist causes irritation and corrosion to skin, eyes, respiratory and digestive tracts. Unlikely to be absorbed via the skin.		
<b>12 - ECOLOGICAL INFORMATION</b>		
Sodium Hydroxide is classed as slightly toxic to living resources - LC50 96hrs 10-100 mg/l. Contains Sodium Hydroxide which in high concentrations in receiving waters will injure aquatic life by the effect on pH. No evidence of bioaccumulation or tainting of seafood.		
BIODEGRADABLE		
<b>13 - DISPOSAL CONSIDERATION</b>		
Respect National and Local regulation. If you are allowed, flush away with copious amounts of water. For larger quantities seek advice from a specialist waste disposal company. Do not use this tank for other products.		
<b>14 - TRANSPORT INFORMATION</b>		
	RID/ADR	IMDG
Class	8	8
Group - Number	8 - 42°b	
Label	8	8
Danger Code	80	
UN Number	1824	1824
Code page		8226
FS		8-06
GSMU		705
Packing Group	II	II
<b>15 - REGULATORY INFORMATION</b>		
LABELS : Corrosive © Contains 4.8% Sodium Hydroxide R34 - Causes burns S2 - Keep out of reach of children S7 - Keep locked up S26 - In case of contact with eyes rinse immediately with plenty of water and seek medical advice. S27 - Take off immediately all splashed or dirty clothing S36/37/39 - Wear suitable clothing, gloves and eye / face protection. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)		
<b>16 - OTHER INFORMATION</b>		
Especially used for Laboratory glassware. The information contained in this Data Sheet does not constitute the users own assessment of work place risk as required by other Health & Safety Legislation.		



## 2. SAFETY DATA SHEET - NEUTRALIZING AGENT "N.L.L."

<b>1 - IDENTIFICATION OF THE PREPARATION</b>	<p>LANCER INDUSTRIE  30 BD DE L'INDUSTRIE Z.I. DU PAHIN  F-31170 TOURNEFEUILLE  Tel. +33 (0)5 61 15 11 11 Fax. +33 (0)5 61 15 16 16  COMMERCIAL DESIGNATION "N.L.L." NEUTRALIZING AGENT  Poison Centre : Tel. +33 (0)5 61 49 33 33</p>												
<b>2 - COMPOSITION INFORMATION</b>	<p>Composition : Product contains amongst other ingredients :  Acetic Acid (Xi : R36/38) 20% w/w  OEL (Acetic Acid) 10ppm long term / 15ppm short term</p>												
<b>3 - HAZARDS INFORMATION</b>	<p>Irritant. Irritating to eyes, skin, digestive system and respiratory system.  Burns can occur.  Spillage will affect vegetation.  Slightly toxic to aquatic life.</p>												
<b>4 - FIRST AID MEASURES</b>	<p>Skin contact : Wash with plenty of water and seek medical advice if any irritation persists.  Eye contact : Wash with plenty of water and seek immediate medical advice.  Ingestion : Give milk or water to drink and seek immediate medical advice. DO NOT INDUCE VOMITING.  Inhalation : Remove person to fresh air and seek medical advice if effects are prolonged.</p>												
<b>5 - FIRE FIGHTING MEASURES</b>	<p>Flash point : N/A. However combustible and may liberate toxic fumes of carbon monoxide in a fire.  Firefighters to wear breathing apparatus and full protective clothing. Use extinguishing medium appropriate to the other materials involved.  Use fog equipment or fine spray. Extinguish preferably with alcohol foam, dry chemical, carbon dioxide or water spray.  Keep containers cool with waterspray.</p>												
<b>6 - ACCIDENTAL RELEASE MEASURES</b>	<p>Wear protective clothing. Ventilate the area well if possible.  For small spillages, flush away with copious amounts of water.  For larger spillages, contain with sand and earth and transfer to a container for disposal in accordance with local authorities.  Inform water authorities if spillage has entered water course.</p>												
<b>7 - PRECAUTIONS FOR STORAGE, USE AND HANDLING</b>	<p>Protect from extremes of temperature  Store in a well ventilated area and keep containers closed.  No smoking  USE BEFORE END OF 5 years after its production date.</p>												
<b>8 - EXPOSURE CONTROLS / PERSONAL PROTECTION</b>	<p>SKIN PROTECTION : PVC / rubber gloves must be worn.  EYE PROTECTION : Wear chemical goggles.  RESPIRATORY PROTECTION : Ensure adequate ventilation. In the event where significant exposure is possible, i.e. spillage or fire, wear breathing apparatus and full protective clothing.</p>												
<b>9 - PHYSICAL &amp; CHEMICAL PROPERTIES</b>	<table> <tr> <td>Appearance :</td><td>Clear, colourless liquid.</td></tr> <tr> <td>Odour :</td><td>Vinegar like</td></tr> <tr> <td>S.G. at 20°C :</td><td>1.025 - 1.030</td></tr> <tr> <td>pH :</td><td>0 - 1</td></tr> <tr> <td>Solubility in water :</td><td>Miscible</td></tr> <tr> <td>Biodegradable.</td><td></td></tr> </table>	Appearance :	Clear, colourless liquid.	Odour :	Vinegar like	S.G. at 20°C :	1.025 - 1.030	pH :	0 - 1	Solubility in water :	Miscible	Biodegradable.	
Appearance :	Clear, colourless liquid.												
Odour :	Vinegar like												
S.G. at 20°C :	1.025 - 1.030												
pH :	0 - 1												
Solubility in water :	Miscible												
Biodegradable.													



**PRODUCT NAME : ACETIC ACID**

<b>10 - STABILITY &amp; REACTIVITY</b>		
Stable under normal storage conditions. Reacts with alkalis and oxidising agents. Do not mix with any other cleaning chemical.		
<b>11 - TOXICOLOGICAL INFORMATION</b>		
For Pure Acetic Acid - Acute toxicity data : INHAL TDLO (human) = 816ppm for 3 mins HIGHLY IRRITANT ORAL LD50 (rat) = 3300 mg/Kg DERMAL LD50 (rabbit) = 1060 mg / Kg		
<b>12 - ECOLOGICAL INFORMATION</b>		
OEL (Acetic Acid) 10ppm long term/15ppm short term for Pure Acetic Acid Practically non-toxic to living resources -LC50 96hrs 100-1000 mg/l. Slightly toxic to aquatic life - TLM 96hrs 10-100mg/l. No evidence of bioaccumulation or tainting of seafood.  BIODEGRADABLE		
<b>13 - DISPOSAL CONSIDERATION</b>		
If need to neutralise, do so very carefully with Soda ash - do not use strong alkalis as excessive heat is generated. Respect National and local regulation. If you are allowed, the small quantities can be flushed away with copious amounts of water. For larger quantities, seek advice from a specialist waste disposal Company. Do not use this tank for other products.		
<b>14 - TRANSPORT INFORMATION</b>		
Class Group - Number Label Danger Code UN Number FS GSMU Packing Group	RID/ADR Not subject to a directive	IMDG Not subject to a directive
<b>15 - REGULATORY INFORMATION</b>		
LABELS : Irritant (Xi) - Contains 20% Acetic Acid. R36/38 - Irritating to skin and eyes S2 - Keep out of reach of children S7 - Keep locked up S23 - Do not breathe gas/fumes/vapour/spray S26 - In case of contact with eyes rinse immediately with plenty of water and seek medical advice. S37 - Wear suitable gloves. S45 - In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)		
<b>16 - OTHER INFORMATION</b>		
Especially used for the rinsing of Laboratory glassware. This product eliminates detergent basic, deposit and calcareous spoors. The information contained in this Data Sheet does not constitute the users own assessment of work place risk as required by other Health & Safety Legislation.		

### 3. PRODUCT HEALTH AND SAFETY DATA SHEET - LUBRICANT "V.L.L."

<b>1 - IDENTIFICATION OF PRODUCT AND COMPANY</b> LANCER INDUSTRIE 30 BD DE L'INDUSTRIE Z.I. DU PAHIN F-31170 TOURNEFEUILLE Tel. +33 (0)5 61 15 11 11 Fax. +33 (0)5 61 15 16 16 COMMERCIAL DESCRIPTION "V.L.L." LUBRICANT Poison centre: Tel. +33 (0)5 61 49 33 33													
<b>2 - INFORMATION ON CONSTITUENTS</b> Composition: Non-ionic, surface-active agent: 5 to 15% Preservative													
<b>3 - IDENTIFICATION OF HAZARDS</b>													
<b>4 - FIRST AID</b> Contact with the skin: Wash with copious quantities of water. Contact with the eyes: Rinse with copious quantities of water. Ingestion: Rinse the mouth with copious quantities of water. <b>DO NOT CAUSE VOMITING.</b> For serious cases: consult a doctor.													
<b>5 - FIRE-FIGHTING MEASURES</b> Use carbon dioxide foam or powder fire extinguishers or water spraying. Spray receptacles copiously with water to cool them.													
<b>6 - STEPS TO BE TAKEN IN CASE OF ACCIDENTAL DISPERSION</b> After recovering the product, clean the premises with copious quantities of water. Warn the relevant authorities in the event of major dispersion.													
<b>7 - PRECAUTIONS FOR STORAGE, USE AND HANDLING</b> HANDLING: STORAGE: Keep the receptacle tightly closed.  USE BEFORE END OF 2 years after its production date <i>indicate with a label on the container.</i> <i>Exemple: 0207001 means made in july the 2<sup>nd</sup>, 2001</i>													
<b>8 - CONTROL OF EXPOSURE - INDIVIDUAL PROTECTION</b> BREATHING PROTECTION: Not necessary PROTECTION OF HANDS: Not necessary PROTECTION OF EYES: Wear protective goggles.													
<b>9 - PHYSICAL AND CHEMICAL PROPERTIES</b> <table> <tr> <td>Physical state - Aspect (form, colour):</td> <td>Colourless liquid</td> </tr> <tr> <td>Density at 20°C:</td> <td>1.05 +/- 0.5 kg/l</td> </tr> <tr> <td>pH:</td> <td>7.5 +/- 0.5</td> </tr> <tr> <td>Solubility in water:</td> <td>complete</td> </tr> <tr> <td>Flash point:</td> <td>not measurable</td> </tr> <tr> <td>Viscosity:</td> <td>not measurable</td> </tr> </table>		Physical state - Aspect (form, colour):	Colourless liquid	Density at 20°C:	1.05 +/- 0.5 kg/l	pH:	7.5 +/- 0.5	Solubility in water:	complete	Flash point:	not measurable	Viscosity:	not measurable
Physical state - Aspect (form, colour):	Colourless liquid												
Density at 20°C:	1.05 +/- 0.5 kg/l												
pH:	7.5 +/- 0.5												
Solubility in water:	complete												
Flash point:	not measurable												
Viscosity:	not measurable												
<b>10 - STABILITY AND REACTIVITY</b> THERMAL DECOMPOSITION: Not measurable Hazardous reactions: Not measurable													

**NAME OF PRODUCT: NON-IONIC AGENT**

<b>11 - TOXICOLOGICAL INFORMATION</b> Ingestion: LD50 > 5000 mg/kg	
<b>12 - ECOLOGICAL INFORMATION</b> The surface-active agents contained in this preparation are biodegradable and comply with the legislation in force.	
<b>13 - CONSIDERATIONS REGARDING ELIMINATION</b>	
<b>14 - INFORMATION REGARDING TRANSPORT</b>	
RID/ADR Class UN Number	IMDG Non-classified product
<b>15 - STATUTORY INFORMATION</b>	
<p><b>LABELS:</b> S2 - Keep out of reach of children.  S7 - Keep the receptacles tightly closed.  S26 - In case of contact with the eyes, wash immediately with copious quantities of water and consult a doctor.  S28 - In case of contact with the skin, wash immediately with copious quantities of water.  S39 - Wear protective equipment for the eyes.  S62 - In case of ingestion: do not cause vomiting. Immediately consult a doctor and show the label. (Rinse the mouth with water.)</p>	
<b>16 - OTHER INFORMATION</b>	
<p>Added to the final rinsing water, preferably demineralized; allows the depositing of a protective film on instrumentation and lubrication of instruments with axis of rotation.</p> <p>This information sheet completes the technical manual on utilization but does not replace it. The information contained in this sheet is based on the state of our knowledge regarding the product concerned at the specified date. This information is given in good faith. The user's attention is, furthermore, drawn to the possible risks involved when a product is used for other purposes than those for which it is designed.</p> <p>This information does not, in any circumstances, dispense with the need for users to know and apply all the provisions regulating their activities. The user shall have sole responsibility for the precautions related to the use this product is put to.</p> <p>The purpose of all the statutory provisions referred to is to help users to fulfil the obligations incumbent on them when using this hazardous product.</p> <p>This list must not be considered exhaustive and does not release the user from checking the stated requirements regarding the storage and handling of the product for which the user is solely responsible.</p>	

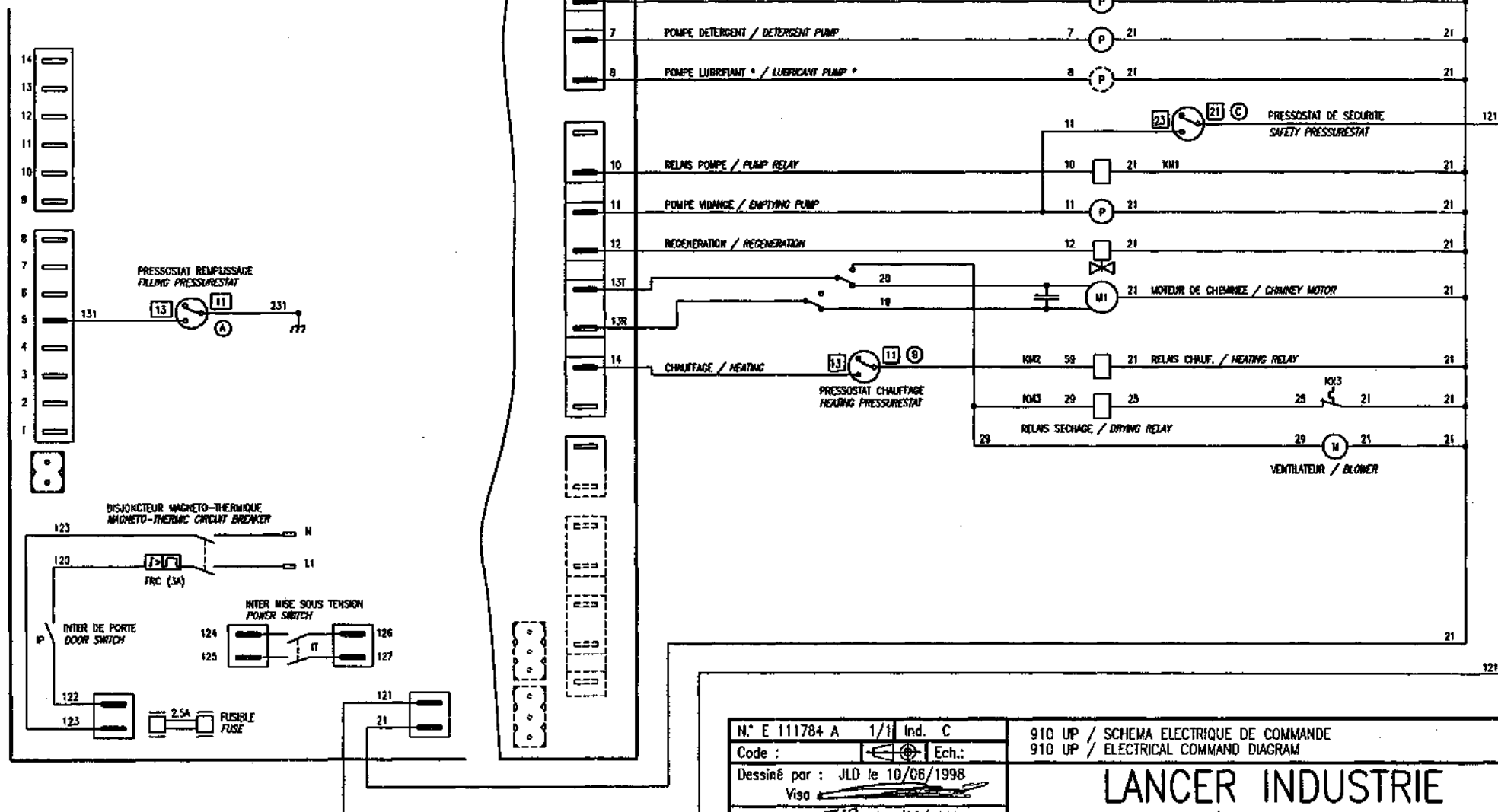
## 4. PRODUCT HEALTH AND SAFETY DATA SHEET – LANCERSHINE

<b>1 – IDENTIFICATION OF PREPARATION</b> LANCER INDUSTRIE 30 BD DE L'INDUSTRIE Z.I. DU PAHIN F-31170 TOURNEFEUILLE Tel. +33 (0)5 61 15 11 11 Fax. +33 (0)5 61 15 16 16 COMMERCIAL DESCRIPTION : LANCERSHINE Poison centre : Tel. +33 (0)5 61 49 33 33 USAGE : Stainless Steel Cleaner & Polish																								
<b>2 – COMPOSITION INFORMATION</b> <table> <tr> <th>Component</th><th></th><th>Classification</th><th>Concentration</th><th>Risk phrases</th></tr> <tr> <td>Hydrocarbon Distillate (F)</td><td>Irritant</td><td>30% → 50%</td><td></td><td>R65 Harmful : May cause lung damage if swallowed</td></tr> <tr> <td>Liquefied Petroleum Gas</td><td></td><td>Not Classifiable</td><td>15% → 30%</td><td></td></tr> <tr> <td>Mineral Oil</td><td></td><td></td><td></td><td></td></tr> </table> Composition Comments : Blend of hydrocarbon distillate and mineral oil. Aerosol propelled by liquefied petroleum gas.					Component		Classification	Concentration	Risk phrases	Hydrocarbon Distillate (F)	Irritant	30% → 50%		R65 Harmful : May cause lung damage if swallowed	Liquefied Petroleum Gas		Not Classifiable	15% → 30%		Mineral Oil				
Component		Classification	Concentration	Risk phrases																				
Hydrocarbon Distillate (F)	Irritant	30% → 50%		R65 Harmful : May cause lung damage if swallowed																				
Liquefied Petroleum Gas		Not Classifiable	15% → 30%																					
Mineral Oil																								
<b>3 – HAZARDS INFORMATION</b> Classification : Classified as extremely flammable. Health Hazards : For aspiration effects see other information. Hydrocarbon distillate (F) and liquefied petroleum have OES's of : - 500 à 1250 mg/m3 for short term exposure (10 min) - 400 à 1000 mg/m3 for long term exposure (8 h) Environmental Hazards : No specific environmental information available.																								
<b>4 – FIRST AID MEASURES</b> Eye Contact : Wash with plenty of water for at least 15mins. Seek immediate medical advice if irritation persists. Skin Contact : Wash with soap or mild detergent and water. Seek immediate medical advice if any irritation persists. Ingestion : Rinse mouth thoroughly with water. Give large amounts of water/milk. Contact physician if large quantity has been consumed. Inhalation : Remove to fresh air. Seek immediate medical advice if any irritation persists.																								
<b>5 – FIRE FIGHTING MEASURES</b> EXTINGUISHING MEDIA : Powder, foam or CO2 extinguishers may be used. SPECIAL PROCEDURES : Use water extinguishers to keep fire-exposed containers cool and disperse vapours. Possible risk of container rupture when exposed to fire/high temperatures. Contents of aerosol will add to fuelling of fire. Fire or high temperatures can create hazardous decomposition products (Oxide of carbon) PROTECTIVE EQUIPMENT : Breathing apparatus should be worn if exposure to fumes is likely.																								
<b>6 – ACCIDENTAL RELEASE MEASURES</b> PERSONAL PRECAUTIONS : Remove all sources of ignition. CLEAN UP : Absorb with sand or other suitable non-flammable absorbent media, and dispose of in a suitable container.																								
<b>7 – PRECAUTIONS FOR STORAGE, USE AND HANDLING</b> HANDLING AND STORAGE : PERSONAL PRECAUTIONS : Avoid contact with skin and eyes. The use of a barrier cream is recommended but not as a substitute for gloves. Keep away from heat, sparks and open flames. STORAGE : Caution: Pressurised container. Do not expose to temperatures exceeding 50°C. Do not puncture or incinerate even when empty. Do not spray onto naked flame or any incandescent material. Keep away from heat, sparks and open flames. Store in a cool, dry place away from all sources of heat including direct sunlight.																								
<b>8 – EXPOSURE CONTROLS / PERSONAL PROTECTION</b> EXPOSURE CONTROLS : No specific controls except this product must not be used in a confined space without good ventilation. RESPIRATORY PROTECTION : Not required under normal use but may be required under exceptional circumstances when excessive air contamination exists. HAND PROTECTION : Chemical resistant gloves required for prolonged or repeated use. EYE PROTECTION : Wear chemical resistant goggles/glasses if there is a risk of eye contact. SKIN PROTECTION : No specific protection required in normal use.																								



(A)	PRESSOSTAT REMPLISSAGE FILLING PRESSURESTAT	115/80
(B)	PRESSOSTAT CHAUFFAGE HEATING PRESSURESTAT	100/70
(C)	PRESSOSTAT SECURITE SAFETY PRESSURESTAT	140/100

\* La pompe lubrifiante est installée:  
- en standard sur les laveurs pour hôpitaux.  
- en option sur les laveurs pour laboratoires.  
\* The lubricant pump is installed:  
- as a standard on the hospital washers.  
- as an option on the laboratory washers.



N° E 111784 A 1/1 Ind. C

Code : Ech.:

Dessiné par : JLD le 10/06/1998

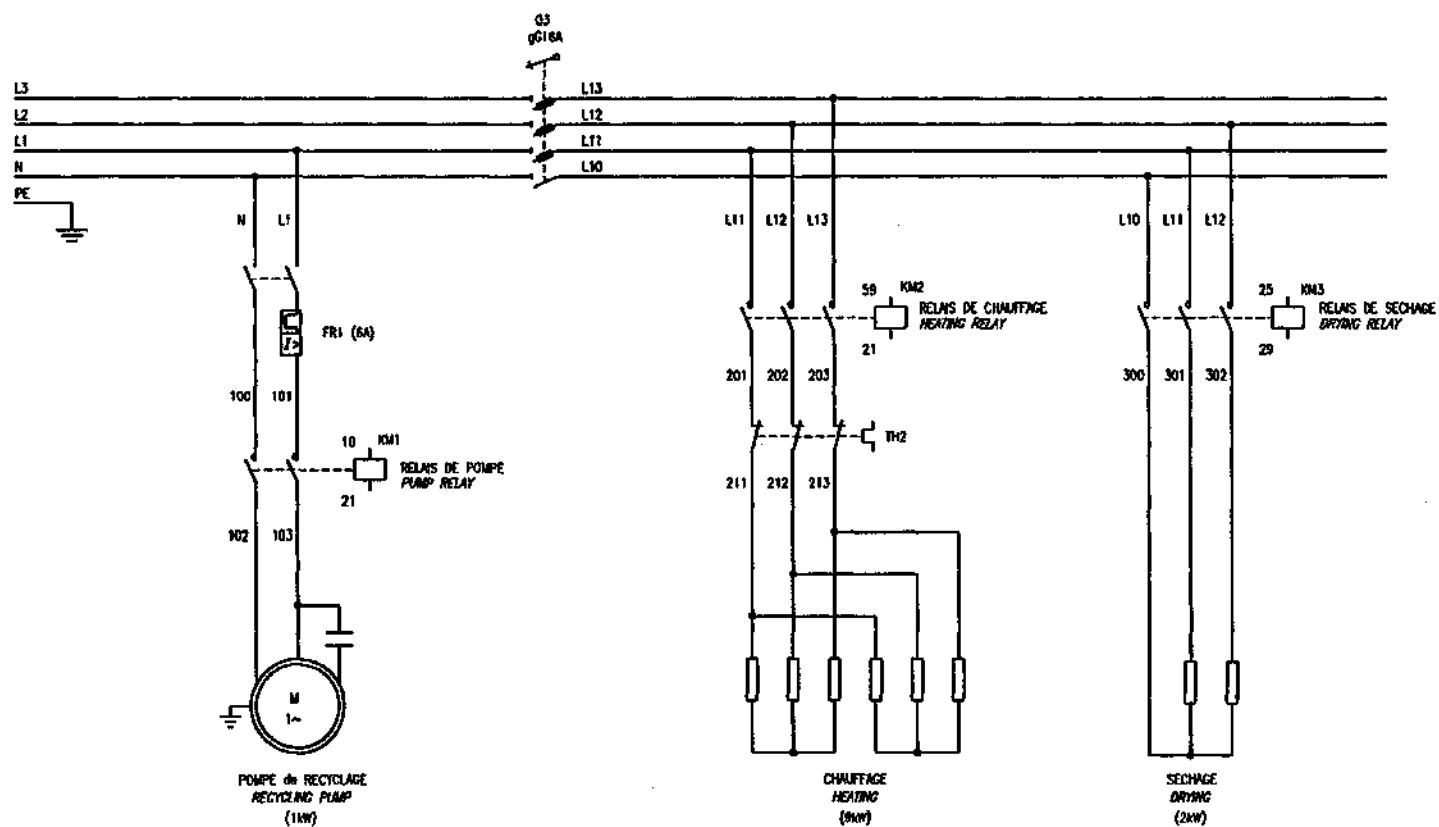
Visa :

Vérifié par : JHB le 11/06/1998

Visa :

910 UP / SCHEMA ELECTRIQUE DE COMMANDE  
910 UP / ELECTRICAL COMMAND DIAGRAM**LANCER INDUSTRIE**Z.I. de Pahin, 30 bld de l'industrie, 31170 TOURNEFEUILLE, France  
Tél.: 05.61.15.11.11, Fax: 05.61.15.16.16





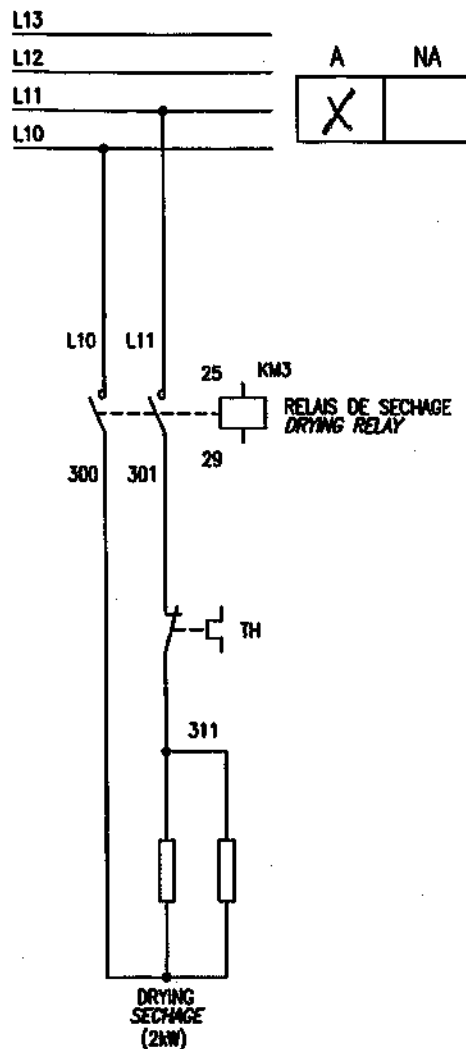
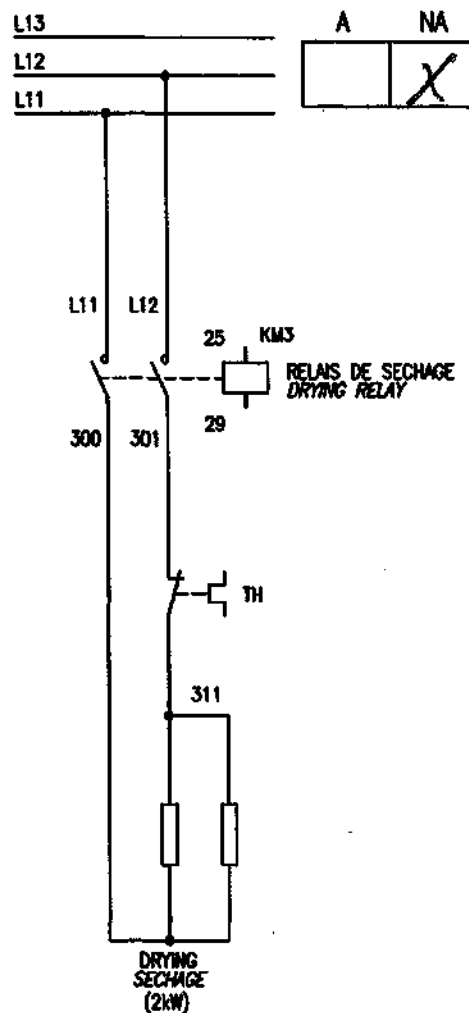
N° E 111821 A	1/1	Ind. D
Code :		Ech.:
Dessiné par : JLD	10/06/1998	
Visa :		
Vérifié par : JLD	10/06/1998	
Visa :		

910 UP / SCHEMA ELECTRIQUE DE PUISSANCE  
910 UP / ELECTRICAL POWER DIAGRAM

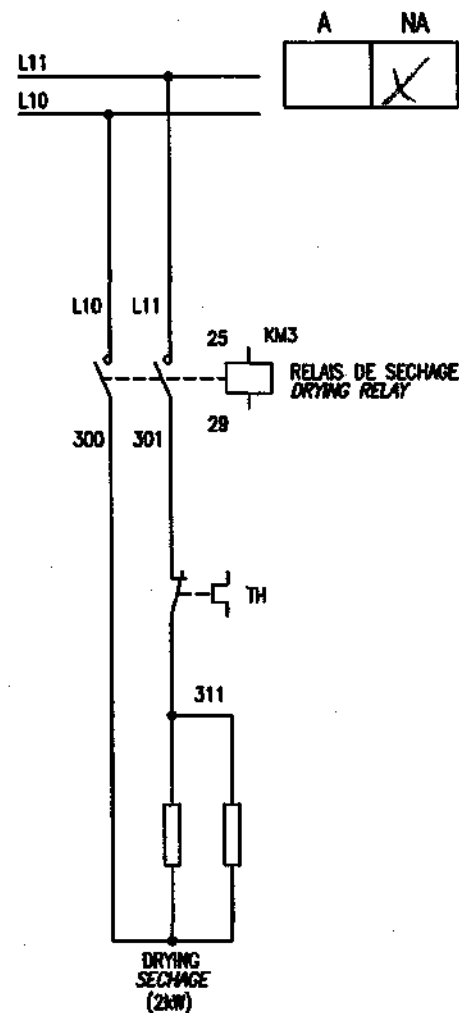
**LANCER INDUSTRIE**

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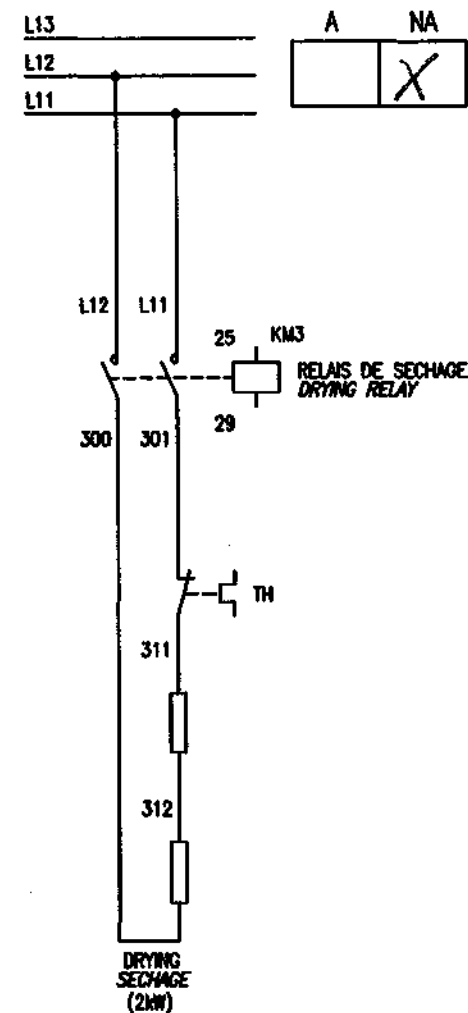
400V TRI+N+T / 50HZ

230V TRI+T / 50HZ  
200V TRI+T / 50HZ

230V MONO / 50HZ



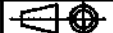
400V TRI+T / 50HZ



CLASSE DE PROTECTION MACHINE : IP21  
WASHER PROTECTION CLASS : IP21

A : APPLICABLE  
NA : NON APPLICABLE / NOT APPLICABLE

N° E113640 N 1/1 Ind. C

Code :  Ech.:

Dessiné par : NS le 14/08/02

Visa : 

Vérifié par : JFM le 14/08/02

Visa : 

910 UP / LIMITEUR DE TEMPERATURE  
910 UP / SAFETY THERMOSTAT

LANCER INDUSTRIE

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